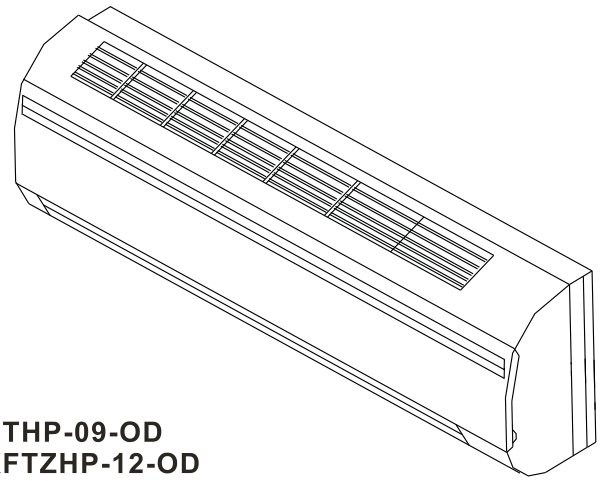
Mini-Split Air Conditioner
OWNER ’S MANUAL

13 SEER Mini Split Air Conditioner



Heat Pump :

KFTHP-09-ID/KFTHP-09-OD
KFTZHP-12-ID/KFTZHP-12-OD

Heat Pump & Back up Electric Heat Strip:
KFTHP-12-ID/KFTHP-12-OD
KFTHP-18-ID/KFTHP-18-OD
KFTHP-24-ID/KFTHP-24-OD

C ETL LISTED US
Intertek
3119233

Thank you for selecting Soleus Air superior quality and high performance mini split air conditioner. To insure highest performance of operation please read this manual and have a qualified HVAC technician install according to the manual

⚠ CAUTION

- All units must be installed by a licensed contractor or technician.
- Installation must be in accordance with this manual,NEC,State and Local Codes. Otherwise unit warranty will be void and serious damage to person and/or property may occur.
- Read all instruction manuals thoroughly before attempting installation.
- The Manufacturer shall NOT be liable for any damages or loss due to improper installation or operation or natural disasters.
- Do not power the unit until all wiring,refrigerant tubing and refrigerant charging has been checked and tested.
- Units must be grounded per current NEC,State and Local Codes.
- Wiring connections must be tightly secured to all terminals.Loose connections can result in electrical arcing,overheating and potential fire hazards.
- For remote control, Do not mix old and new batteries. Do not mix Alkaline, standard (Carbon - Zinc), or rechargeable (Nickel - Cadmium) batteries.

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Preparation Before Use

Before using the air conditioner, be sure to check and pre-set the following.

- ***Remote Controller Pre-setting***

The remote controller is **NOT** preset and should be set by owner.

Each time after the remote Control batteries are replaced, or is energized, the symbol will flash from "Cool" and "HEAT" alternatively.
User can preset the remote control type depending on the air conditioner type you have purchased as follows :

Press any button when the heating symbol flashes ,then Heat Pump is set.
Press any button when the cooling symbol flashes ,then Cooling Only is set.
If you dont press any button within 10 seconds, the remote controller is pre-set as Heat Pump automatically.

Note:
If the air conditioner you purchased is a Cooling Only one, but you pre-set the remote controller as Heat Pump,* it will operate properly in cooling.*. But if the air conditioner you purchased is a Heat Pump one, and you preset the remote controller as Cooling Only, then you CAN NOT preset the Heating operation with the remote controller.

- ***Auto-restart Pre-setting(optional):***

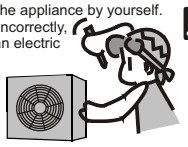
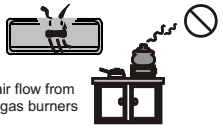
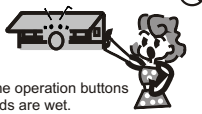
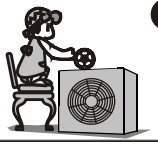
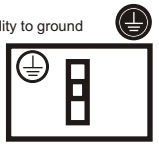
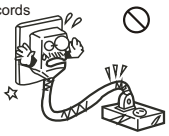
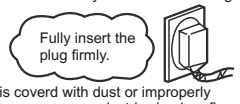
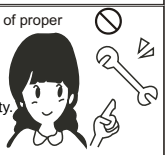
the air conditioner is preset as Auto-restart function by manufacturer.If Auto-restart function is not needed, follow the steps below to cancel this function:
1) Make sure the air conditioner power is turned off at remote control.
2) Keep pressing the Emergency button for more than 10 seconds until four short beeps are heard. Then Auto-restart function is disabled. To activate the Auto-restart function, repeat above procedure until three short beeps are heard.

--This air conditioner is not intended for use by young children or handicapped persons unless they have been adequately supervised by a responsible person to ensure that they can use the air conditioner safely
--Young children should be supervised to ensure that they do not play with the air conditioner.

Safety Precautions

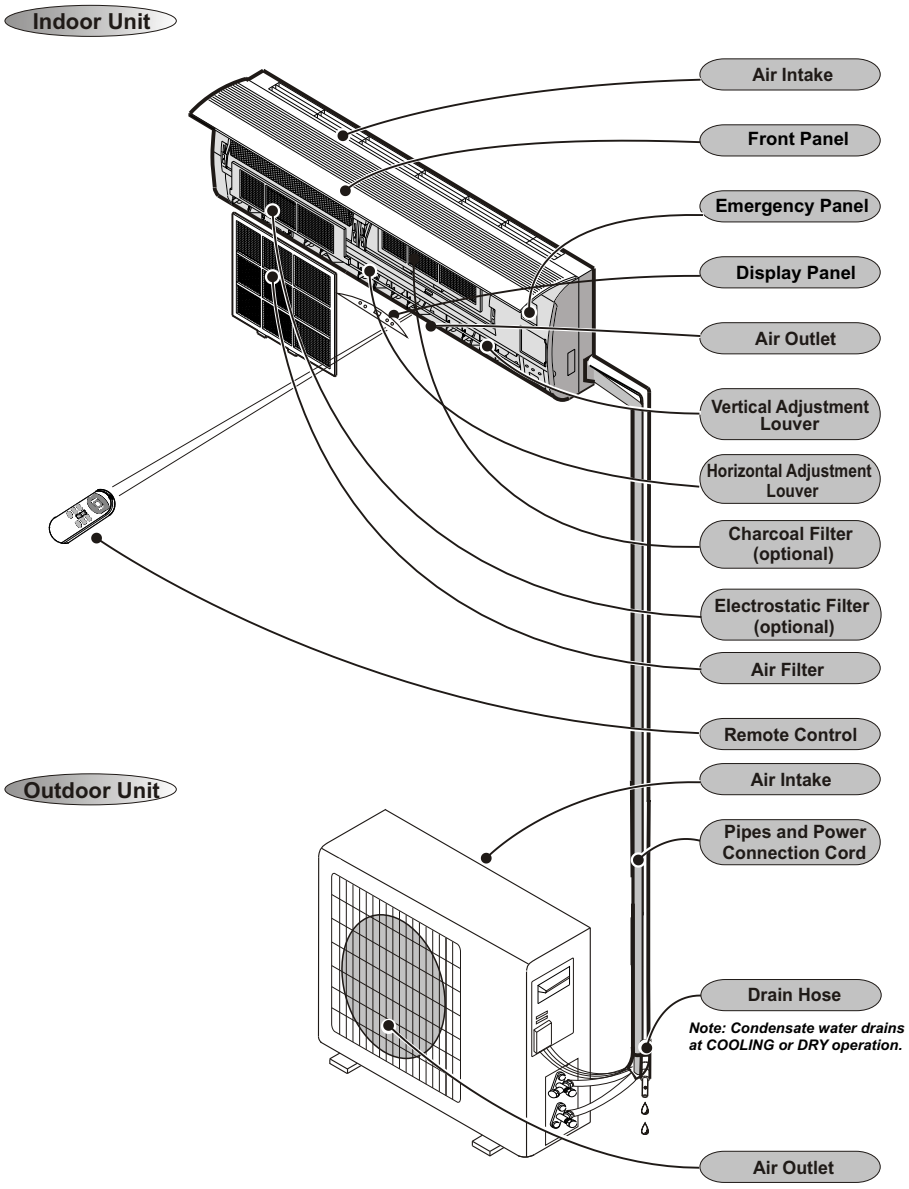
Symbols in this Use and Care Manual are interpreted as shown below.

- WARNING! DANGER!
- CAREFUL! Pay Attention.
- Grounding is essential.
- Be sure to follow this instruction.
- Remove the power source plug from a socket.
- Warning: Incorrect handling could cause a serious hazard, such as death, serious injury, etc.

Use correct power supply in accordance with the rating plate requirement. Otherwise, serious faults or hazard such as a fire could occurt. If the supply cord is damaged,it must be replaced by the manufacturer,its service agent or similarly qualified persons in order to avoid a hazard.	Keep the power supply circuit breaker or plug from dirt. Connect the power supply cord to it firmly and correctly, or hazard could occur.	Do not use the power supply circuit breaker or pull off the plug to turn it off during operation. This may cause a fire due to spark, etc.
Do not tangle, pull or press the power supply cord, as this cord will be damaged and an electric shock or fire could occur.	Never insert a stick or similar obstacle to the unit. When the fan rotates at high speed, this may cause an injury.	IDo not stand in front of indoor unit for extended periods of time due to health hazard.
If malfunction occurs turn off at remote control first before turning off main power.	Do not repair the appliance by yourself. If this is done incorrectly, it may cause an electric shock, etc. 	Prevent the air flow from reaching the gas burners and stoves. 
Do not touch the operation buttons when your hands are wet. 	Do not put any objects on the outdoor unit. 	It is the user's responsibility to ground the appliance according to local codes or ordinances by a licenced technician. 
Do not use extension cords and do not connect the air conditioner to a socket to which other electric appliances are connected. 	Check that the plug is not covered with dust and make sure to insert it firmly so that it does not get loosened.  If the plug is coverd with dust or improperly inserted, thes may cause electric shock or fire.	When not using the system for a long time, remove the plug from the socket to ensure safety. If the plug is covered with dust,it could cause a fire.
Make sure to use a fuse of proper electric rating. Use of steel or copper wire instead of a fuse is strictly prohibited and will void the warranty. 	Do not wash the air conditioner with water. It could cause electric shocks.	If abnormal conditions occur,such as smell of burning,immediately stop the system' operation,remove the power plug and consult your Dealer. Operating the system under abnormal conditions could result in malfunctions,eletric shocks,fire,etc.
Do not put anything on the unit, especially vases which contain water inside. If water gets into the unit,it can cause an electrical short and this could cause electric shocks.	When the system is operating simultaneously with a combustion apparatus,you should air the room frequently. Insufficient ventilation could cause an oxygen deficiency accident.	Before cleaning the system,stop the operation and remove the power plug. Cleaning should never be carried out while the inside fans are running.

Notes:For the purpose of innovation and improvement,above products are subject to change without prior notice.
The air conditioner is not a toy , please keep away from children.The appliance shall not be installed in the laundry area.

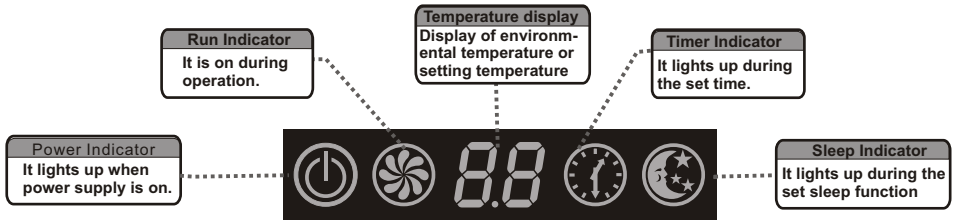
Identification of Parts



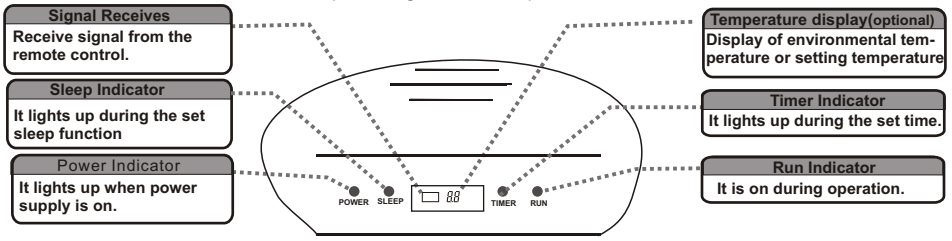
☑ *The figures in this manual are based on the external view of a standard model. Consequently, the shape may differ from that of the air conditioner you have selected.*

Identification of Parts

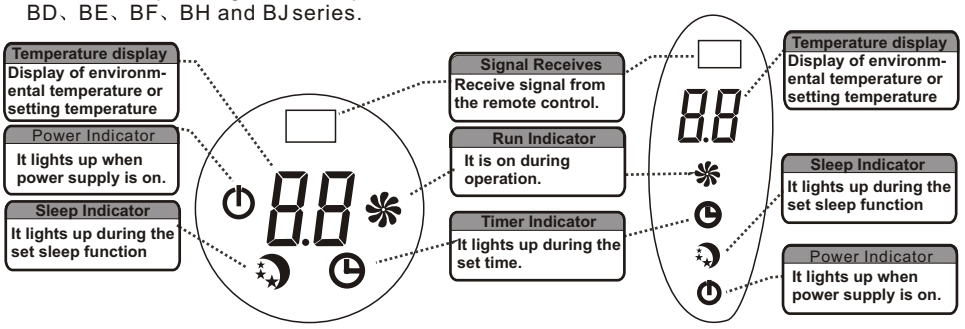
Operating and Display


Run Indicator
It is on during operation.
Temperature display
Display of environmental temperature or setting temperature
Timer Indicator
It lights up during the set time.
Power Indicator
It lights up when power supply is on.
Sleep Indicator
It lights up during the set sleep function

The above operating sketch map is suitable for Z 、BG series.

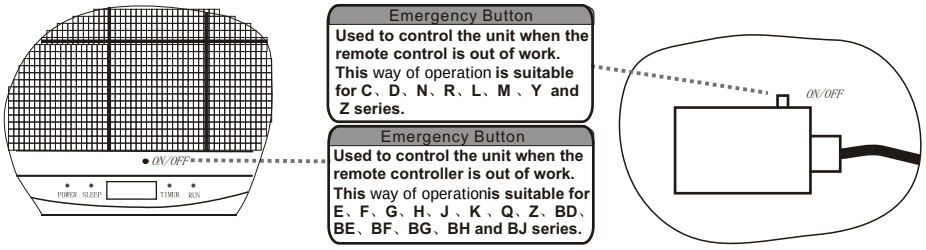


The above operating sketch map is suitable for C、D、E、F、G、H、J、K、M 、 N、V、Z、BD、BE、BF、BH and BJ series.


Temperature display
Display of environmental temperature or setting temperature
Power Indicator
It lights up when power supply is on.
Sleep Indicator
It lights up during the set sleep function
Signal Receives
Receive signal from the remote control.
Run Indicator
It is on during operation.
Timer Indicator
It lights up during the set time.
Temperature display
Display of environmental temperature or setting temperature
Sleep Indicator
It lights up during the set sleep function
Power Indicator
It lights up when power supply is on.

The above operating sketch map is suitable for L 、R and Y series.

The above operating sketch map is suitable for Q series.


Emergency Button
Used to control the unit when the remote control is out of work.
This way of operation is suitable for C、D、N、R、L、M 、Y and Z series.
Emergency Button
Used to control the unit when the remote controller is out of work.
This way of operation is suitable for E、F、G、H、J 、K 、Q、Z、BD、BE、BF、BG、BH and BJ series.
ON/OFF
POWER
SLEEP
TIMER
RUN
ON/OFF

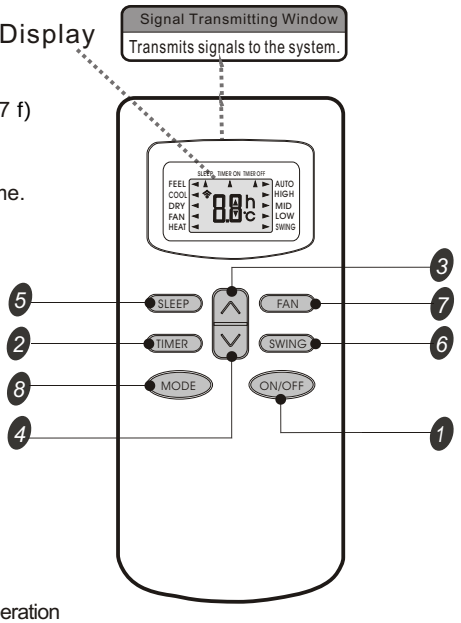
Remarks:When remote control is not working properly,,open the panel and you can see emergency button there,(see above picture).The emergency button for 15K、16K、18K、22K、24K 、28K and 30K series is at the top right,see "ON/OFF" button there.

☑ ***The shape and position of the switches and indicators may vary from different models,but their function are simiar.***

Remote Control

Remote Control

The remote control transmits signals to the system.



1 ON/OFF button

Used to start and stop operation .

2 TIMER button

Used to select TIMER operation.

3 UP button (TOO COOL button) ▲

Used to increase the set room temperature (60 f ~87 f) and time(0.5~24h or 1~12h).

4 DOWN button (TOO WARM button) ▼

Used to decrease the set room temperature and time.

5 SLEEP button QUIET

Used to set or cancel sleep operation.It includes normal-SLEEP(QUIET)and Comfortable-SLEEP( ),but Comfortable-SLEEP is optional.

6 SWING control button

Used to adjust airflow direction.

7 FAN SPEED control button

Used to select the indoor fan motor speed: Auto(or), High(or or), Mid(or or) and Low(or or). This function is invalid in sleep mode.

8 MODE button

Used to select the type of operation mode: FEEL( ), COOLING( ), DRY( ), FAN( ) AND HEATING (Only for Heat Pump).FEEL mode can select the operation mode such as COOL,DRY,FAN,HEAT automatically depending on the room temperature,and the feel mode is default setting at starting.

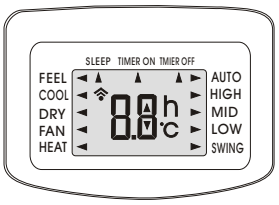
Check list

Species	Quantity
Expending sleeve style	6
Self tapping screw	6
User manual	1
AAA battery	2
Drainage pipe	1
Remote control&base	1
Energy label	1
Sleeve pipe	1
Seal daub	1
Binder	1
Screw assembly	1

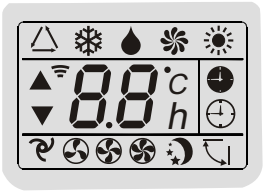
Remote Control

Remote Control

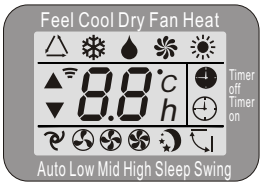
Some remote control's display:



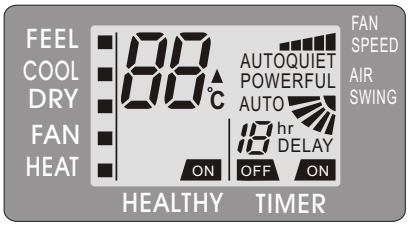
Style.1



Style.2.



Style.3



Style.5

Style.4

Note:The above remote control is only for reference, subject to the actual unit.

☑ When inserting the batteries for the first time or each time the batteries are replaced as they are discharged, the remote control mades a short "Auto-Test":all the symbols can be displayed are shown on the screen and keep 2 seconds,then the symbol will flash from "Cool" to "HEAT" alternatively.For cooling only air con, please press any button when the cooling symbol is flashing,the the remote controller has been set as cooling only.For cooling and heating ,please press any button when the heating symbol is flashing,then the remote control has been set as cooling and heating.If none of the button is pressed within 10 seconds,the remote controller will be set as cooling and heating automatically.Cooling only can use the remote control which has cooling and heating function,but do not have the function of heating. Although the heating is not running,remote control will still have some display.

☑ The light of the remote control will be turned on by pressing any button for 1.5~3 seconds,and it will be turned off automatically if no button is pressed within 10 seconds.

Remote Control

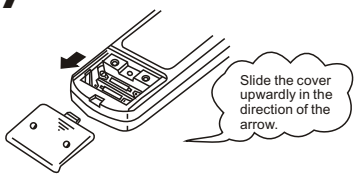
Remote Control

How to Insert the Batteries

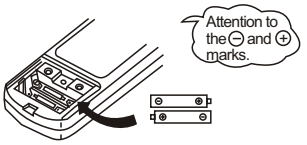
Remove the battery cover according to the arrow direction.
Insert new batteries making sure that the (+) and (-) of battery are matched correctly.
Re-attach the cover by sliding it back into position.

Note:
Use 2 LR03 AAA(1.5volt) batteries. Do not use rechargeable batteries.Replace batteries with new ones of the same type when the display becomes dim.

1 Please slide and remove the cover.



2 Exchange the batteries.

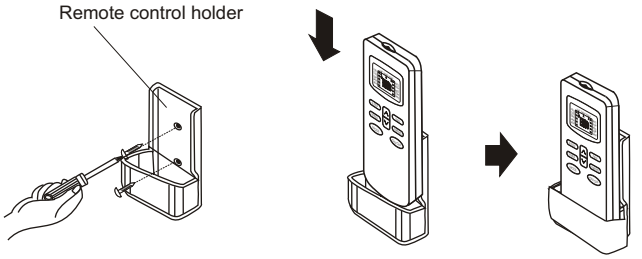


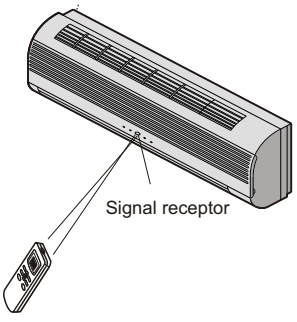
3 Install the cover.

Storage and Tips for Using the Remote Control

The remote control may be mounted on a wall with a holder.

Note: The remote control holder is an optional part.





How to Use

To operate the room air conditioner, aim the remote control to the signal receptor. The remote control will operate the air conditioner at a distance of up to 10 feet when pointing at signal receptor of indoor unit.

Operation Instructions

FEEL mode operation procedure

Operates by selecting automatically the operation mode(HEAT,DRY,FAN,COOL)depending on the room temperature during staring.

With the remote control pointing toward the air conditioner.

Turning on

Press ON/OFF button, when the appliance receives the signal, the RUN indicator of the indoor unit lights up.

1

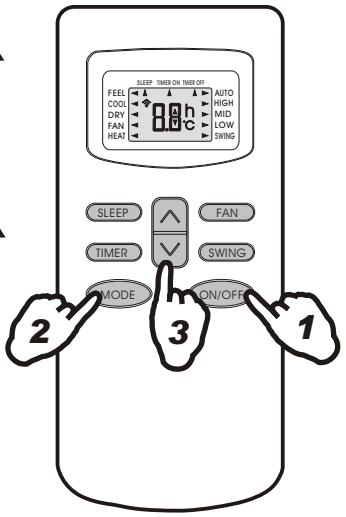
When the unit is not at FEEL mode.

Selecting FEEL mode

Press the MODE select button.

Move the MODE to the FEEL position.

2



Operation mode and temperature are determined by indoor temperature

Indoor temperature	Operation mode	Target temperature
Less than 68 f	HEATING (FOR HEAT PUMP TYPE) FAN (FOR COOL ONLY TYPE)	73 f
68 f - 79 f	DRY	64 f
Over 79 f	COOL	73 f

Air temperature adjustment is possible even during FEEL operation.
There are 4 levels of adjustment possible with the ^ button or the v button.

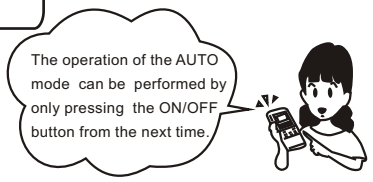
Setting temperature

Press the ^ button or the v button.
When the ^ button is pushed,the temperature will increase 1 f .
After temperature will increase 2 f,the indicator will not change.
When the v button is pushed,the temperature will reduce 1 f .
After temperature reduce 2 f ,the indicator will not change.

3

NOTE

There will be a delay when changing mode is made during the operation.
As there might not be air blown out.



- If you don't like the content of FEEL mode operation, change to HEATING,DRY or COOLING than FEEL.

Operation Instructions

TIMER mode

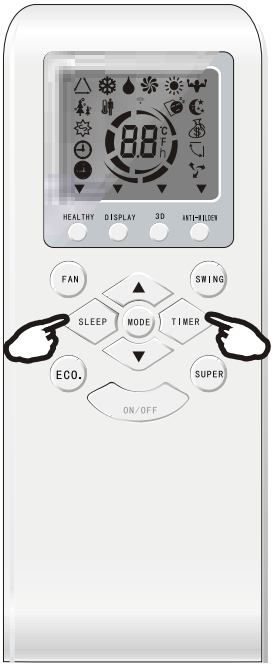
It is convenient to set the timer on with **TIMER** button when you go out in the morning to achieve a comfortable room temperature when you get home. You can also set timer off at night to enjoy a good sleep.

Timer-setting

When the Remote Control is OFF,press the TIMER button to set a switch-on timer,press again,the setting will be cancel.

When the Remote Control is ON,press the TIMER button to set a switch-on timer, press again,the setting will be cancel.

Press UP and DOWN button to set time.
Time setting is 30-minutes.



Note: *After setting the timer,check that TIMER INDICATOR lamp of the indoor unit lights.*

SLEEP mode

1. **Normal-SLEEP& Comfortable-SLEEP(optional)**

   Having press the SLEEP button for 3 seconds, SLEEP operation is switched from Normal-SLEEP to Comfortable-SLEEP alternatively. Used to set or cancel sleep operation.This function is invalid in fan and dehumidify mode,This function is invalid in SUPER mode too. Switches OFF the appliance automatically after 10 hours in Normal-SLEEP mode.

2. **Normal-SLEEP only**

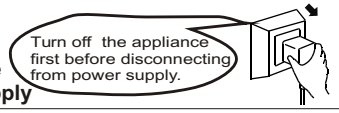
   While the unit is running,. Select the operating mode and then press SLEEP button:the indoor fan speed operates at low speed.Switches OFF the appliance automatically after 8 hours.

Comfortable-SLEEP note:
In this model,the temperature will automatically be adjusted with the body temperature, like the english letter "V", at the first stage of sleep, the body temperature will decrease when our air-conditioner's set-temperature decrease together; and at the last stage of sleep, the body temperature will increase when our air-conditioner's set-temperature increase together. It will help you sleep more comfortably.

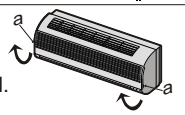
Maintenance

Front panel maintenance

1 Cut off the power supply



2 Grasp position "a" and pull outward to remove the front panel.

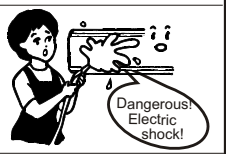


3 Wipe with a soft and dry cloth.

Use lukewarm water(below 104 f) to clean if the appliance is very dirty.

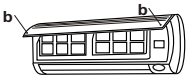
4 Never use volatile substance such as gasoline or polishing powder to clean the appliance.

5 Never sprinkle water onto the indoor unit



6 Reinstall and shut the front panel.

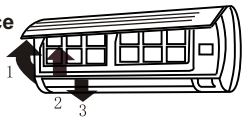
Reinstall and shut the front panel by pressing position "b" downward.



Air filter maintenance

It is necessary to clean the air filter after using it for about 100 hours.
Clean it as follows:

1 Stop the appliance and remove the air filter.



1.Open the front panel.
2.Press the handle of the filter gently from the front.
3. Grasp the handle and slide out the filter.

2 Clean and re-install the air filter.

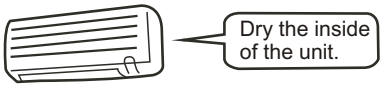
If the dirt is conspicuous, wash it with a solution of detergent in lukewarm water. After cleaning, dry well in shade.

3 Close the front panel again.

☑ ***Clean the air filter every two weeks if the air conditioner operates in an extremely dusty environment.***

At the end of the season

1 Set temperature to 86 f for about half a day and perform the Cooling operation to dry well the Unit's inside.



2 Stop the unit operation and then turn off the power switch for safety and for saving electric energy.

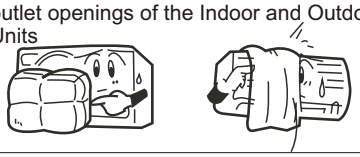
3 Clean and reinstall the air filters.

4 Clean both Indoor and Outdoor Units.

5 Remove batteries from the remote control .

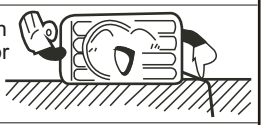
At the beginning of the season

1 Make sure there are no obstacles blocking the airflow around the air intake and air outlet openings of the Indoor and Outdoor Units



2 Check the installation base for corrosion or rust.

3 Make sure the earth wire is not broken or disconnected



4 Make sure the air filters are cleaned.

5 Turn on the power switch.

6 Insert batteries into the remote controller.

Protection

Operating condition

The protective device maybe trip and stop the appliance in the cases listed below.

HEATING	Outdoor air temperature is over 75 f
	Outdoor air temperature is below -19 f (-5 f for inverter models,it's optional)
	Room temperature is over 80 f
COOLING	Outdoor air temperature is over *110 f (or below 32 f for inverter models)
	Room temperature is below 69 f
DRY	Room temperature is below 64 f

**** For Tropical (T3) Climate condition models, the temperature point is* 96 f *instead of* 96 f.**

If the air conditioner runs in COOLING or DRY mode with door or window opened for a long time when relative humidity is above 80%,dew may drip down from the outlet.

Noise pollution

- Install the air conditioner at a place that can bear its weight in order to operate more quietly.
- Install the outdoor unit at a place where the air discharged and the operation noise would not annoy your neighbors.
- Do not place any obstacles in front of the air outlet of the outdoor unit as it will increase the noise level and possible malfunction of fan motor.

Features of protector

❶ **The protective device will work as follows.**

- Restarting the unit at once after operation stops or changing mode during operation, you need to wait 3 minutes.
- Connect to power supply and turn on the unit at once, it may start 20 seconds later.

❷

- If all operation has stopped, press **ON/OFF** button again to restart.
- Timer should be set again if it has been canceled.

Inspection

After using for long time, the air conditioner should be inspected on the following items.

- Overheat of the power supply cord and plug or even a burned smell.
- Abnormal operating sound or vibration.
- Water leakage from indoor unit.
- Metal cabinet electrified.

☑ ***Stop the air conditioner if above trouble occurs. It is advisable to have a detail inspection after using it for 5 years even if none above occurs.***

Features of HEATING mode

Preheat

At the beginning of **HEATING** operation, the airflow from indoor unit is discharged 2-5 minutes later.

Afterheat

After the finishing of **HEATING** operation, the airflow from indoor unit is discharged 2-5 minutes.

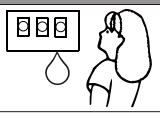
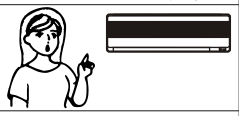
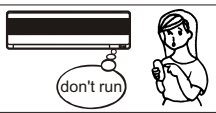
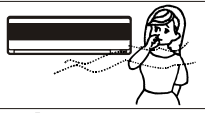
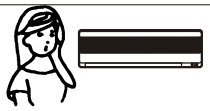
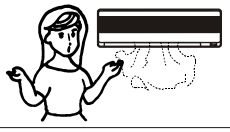
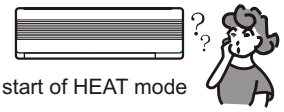
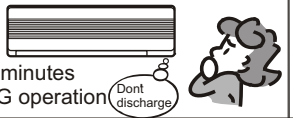
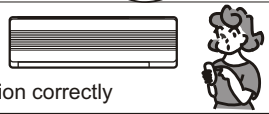
Defrost

In **HEATING** operation the appliance will defrost (de-ice) automatically to raise efficiency. This procedure usually lasts 2-10 minutes. During defrosting, fans stop operation. After defrosting completes, it returns to **HEATING** mode automatically.

Note: Heating is NOT available for cooling only air conditioner models.

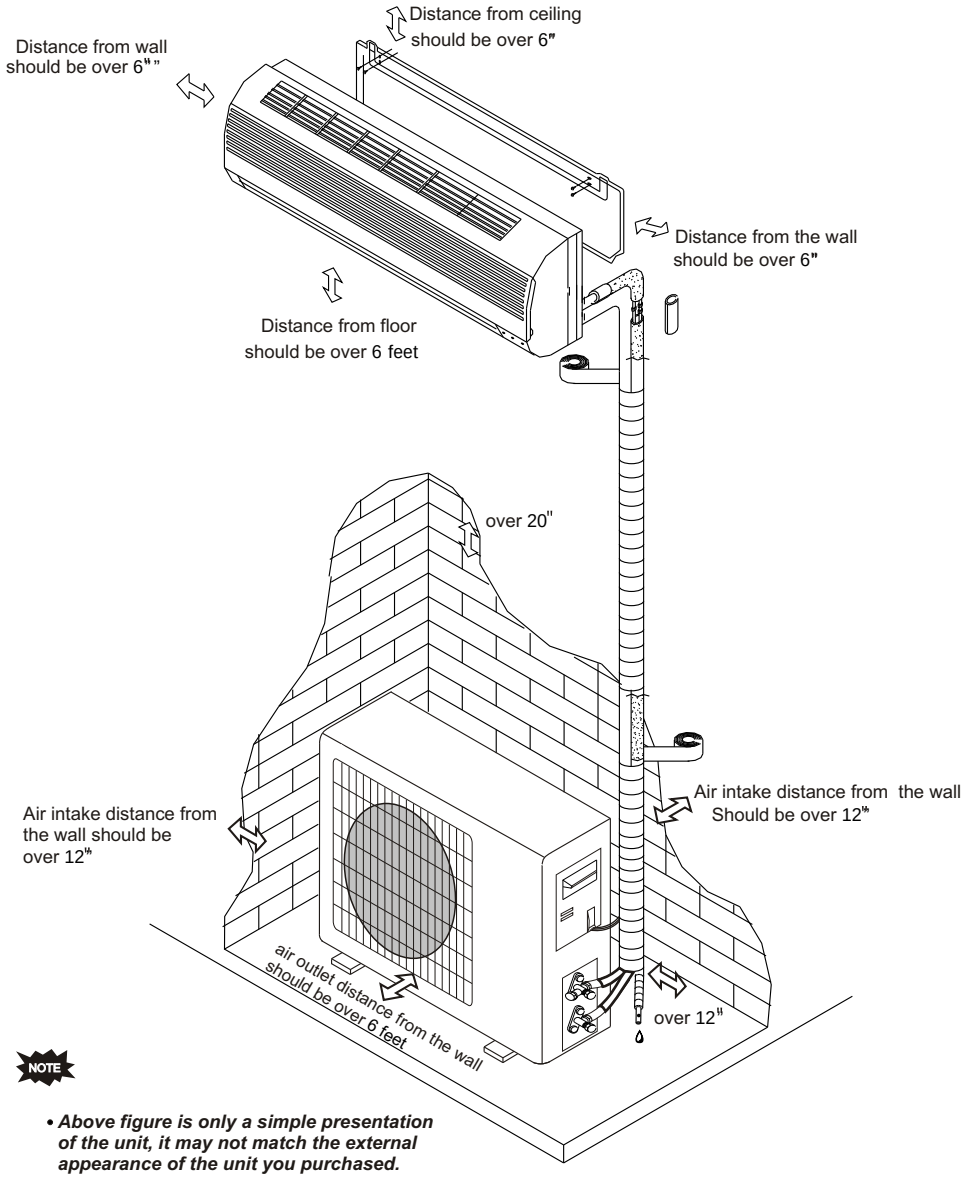
Troubleshooting

The following cases may not always be a malfunction, please check it before asking for service.

Trouble	Analysis
Does not run 	• If the plug is not properly plugged. • If batteries in the remote controller exhausted. • If the protective device works to protect the appliance. • If the protector trip or fuse is blown.
No cooling or heating air 	• Are the intakes and outlets of the air conditioner blocked? • Is the temperature set properly? • Is the air filter dirty?
Ineffective control	• If strong interference(from excessive static electricity discharge, power supply voltage abnormality)presents, operation will be abnormal. At this time, disconnect from the power supply and connect back 2-3 seconds later.
Does not operate immediately 	• Changing mode during operation, 3 minutes will delay.
Peculiar odor 	• This odor may come from another source such as furniture, cigarette etc, which is sucked in the unit and blows out with the air.
A sound of flowing water	• Caused by the flow of refrigerant in the air conditioner, not a problem. • Defrosting sound in heating mode.
Cracking sound is heard 	• The sound may be generated by the expansion or contraction of the front panel due to change of temperature.
Spray mist from the outlet 	• Mist appears when the room air becomes very cold because of cool air discharged from indoor unit during **COOLING** or **DRY** operation mode.
The compressor indicator(red) lights on constantly,and indoor fan stops.	• The unit is shifting from heating mode to defrost. The indicator will lights go off within ten minutes and returns to heating mode.
Air will not immediately blow out at the start of HEAT mode 	• The air conditioner is ready to blow out enough warm air please wait(2~5 minutes)
Stop discharging airflow for 5~10minutes during HEATING operation 	• The appliance will defrost automatically ,and mist appears from outdoor.After defrosting ,it continues to run automatically.
The remote control does not function correctly 	• check the distance between the remote controller and the unit. • Are the batteries exhausted? Replace them with new ones,and repeat the operation again.

Installation Instructions

Installation Diagram



NOTE

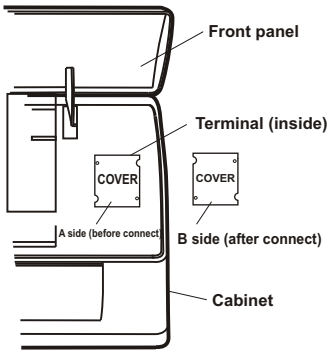
- ***Above figure is only a simple presentation of the unit, it may not match the external appearance of the unit you purchased.***
- ***Installation must be performed in accordance with the national wiring standards by authorized personnel only.***
- ***Very Important-Installation must done by a registered qualified installer.(Refer warranty section at the back of this manual)***

Installation Instructions

Connecting of the Cabble

Wiring between the indoor and outdoor units:

1) Remove the PCB cover from the indoor unit;
2) Refer to the wiring diagram attached to indoor unit when connecting cords to indoor unit terminals;
3) Reinstall the PCB cover. Be sure that side **B** is facing outside.

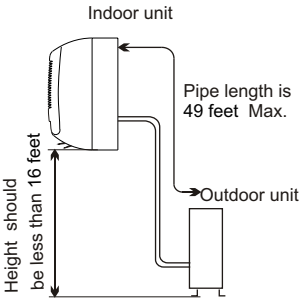


Select the best location

Location for Installing Indoor Unit

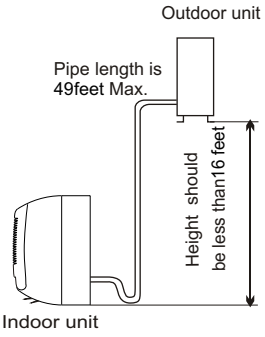
- Where there is no obstacle near the air outlet and air can be easily blown to every corner.
- Where piping and wall hole can be easily arranged.
- Keep the required space from the unit to the ceiling and wall according to the wiring diagram.
- Where the air filter can be easily removed.
- Keep the unit and remote control 3 feet or more apart from television, radio etc.
- Keep as far as possible away from fluorescent lamps.
- Do not put anything near the air inlet to obstruct it from air absorption.
- Where there is bearing wall to handle weight and decrease vibration and noise.

Installation Diagram



Location for Installing Outdoor Unit

- Where it is convenient to install and well ventilated; avoid installing it where flammable gas could leak.
- Keep the required distance apart from the wall.
- Keep the outdoor unit away from a place of greasy dirt, vulcanization gas exit or high salty seashore.
- Avoid installing it at the roadside where there is a risk of muddy water.
- A fixed base so as not to increasing operation noise.
- Where there is no blockage for air outlet.

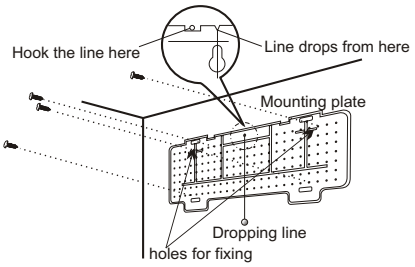


Installation Instructions

Indoor Unit Installation

1. Installing the Mounting Plate

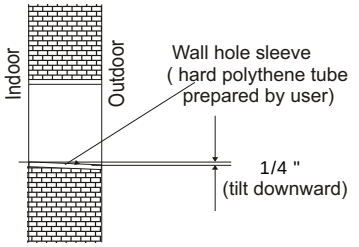
- Decide an installing location for the mounting plate according to the indoor unit location and piping direction.
- Keep the mounting plate horizontally with a horizontal ruler or dropping line.
- Drill holes of 1" in depth on the wall for fixing the plate.
- Insert the plastic plugs to the hole, fix the mounting plate with tapping screws.
- Inspect if the mounting plate is well fixed. Then drill a hole for piping.



Note: The shape of your mounting plate may be different from the one above, but installation method is similar.

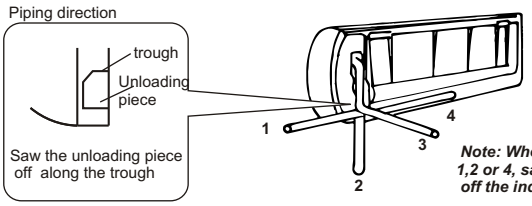
2. Drill a Hole for Piping

- Decide the position of hole for piping according to the location of mounting plate.
- Drill a hole on the wall. The hole should tilt a little downward toward outside.
- Install a sleeve through the wall hole to keep the wall tidy and clean.



3. Indoor Unit Piping Installation

- Put the piping (liquid and suction pipe) and cables through the wall hole from outside or put them through from inside after indoor piping and cables connection complete so as to connect to outdoor unit.
- Decide whether saw the unloading piece off in accordance with the piping direction.(as shown below)



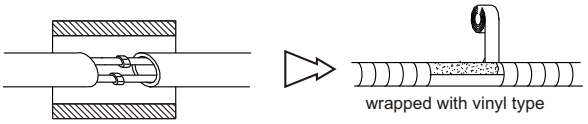
Note: When installing the pipe at the directions 1,2 or 4, saw the corresponding unloading piece off the indoor unit base.

- After connecting piping as required, install the drain hose. Then connect the power cords. After connecting, wrap the piping, cords and drain hose together with thermal insulation materials.

Installation Instructions

NOTE

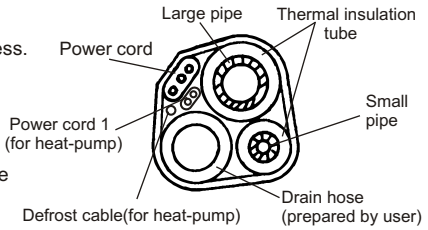
- ***Piping Joints Thermal Insulation:*** Wrap the piping joints with thermal insulation materials and then wrap with a vinyl tape.



- The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.

- ***Piping Thermal Insulation:***

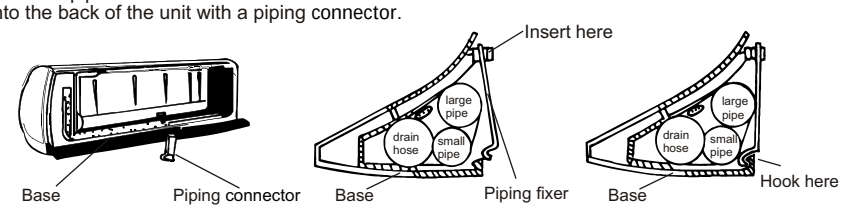
  a. Place the drain hose under the piping.
  b. Insulation material uses polythene foam over 3/8" in thickness.
  Note: Drain hose is prepared by user.



- Drain pipe should point downward for easy drain flow. Do not arrange the drain pipe twisted, sticking out or wave around, do not immerse the end of it in water.

  If an extension drain hose is connected to the drain pipe, make sure to thermal insulated when passing along the indoor unit.

- When the piping is directed to the right, piping, power Cord and drain pipe should be thermal insulated and fixed onto the back of the unit with a piping connector.



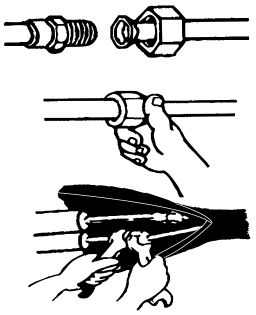
A. Insert the pipe connector to the slot. B. Press to hook the pipe connector onto the base.

Connecting the refrigerant lines between the indoor& outdoor units

Note that since the refrigerant metering device is located in the outdoor unit,both refrigerant lines must be insulated with a minimum of 3/8" foam along the entire length.

Gently bend the line set stubs from the indoor unit to the desired location and the using 2 box end or adjustable wrenches,remove the flare nuts from the indoor unit line stubs.The indoor unit is charged with a dry gas.If you do not hear the release of pressure when removing the flare nuts,it is possible that the evaporator section(indoor unit)has developed a leak and you should contact your dealer for a replacement indoor unit.Note:Using a small amount of vacuum pump oil on the male flare threads will ease installation.Snug the line set to the stubs using the 2 wrenches-one wrench on the male fitting and one wrench on the female fitting.

Tighten flares tobelow torques:



Refrigerant Line Connection Torque Table

Flare Nut	Tightening Torque
1/4-3/8"	25 Ft.LBs(350 Kg.Cm)
1/4-1/2"	40 Ft.LBs(560 Kg.Cm)
1/2-3/4"	60 Ft.LBs(840 Kg.Cm)
7/8-1 1/8"	110 Ft.LBs(1540Kg.Cm)

Installation Instructions

4. Connecting of the Cable

- ***Indoor Unit***

  Connect the power connecting cord to the indoor unit by connecting the wires to the terminals on the control board individually in accordance with the outdoor unit connection.

Note: For some models, it is necessary to remove the cabinet to connect to indoor unit terminal.

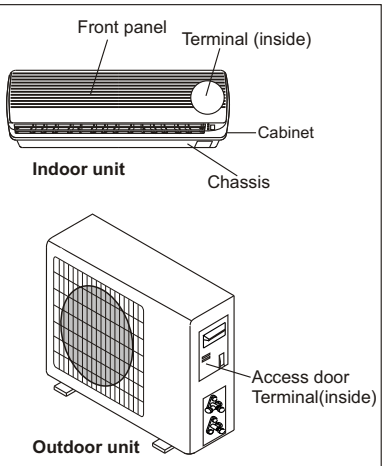
- ***Outdoor Unit***

  1). Remove the access door from the unit by loosening the screw. Connect the wires to the terminals on the control board individually as the following.

  2). Secure the power connecting cord onto the control board with cable clamp.

  3). Reinstall the access door to the original position with the screw.

  4) Use a recognized circuit breaker for 24K.30K model between the power source and the unit. A disconnecting device to adequately disconnect all supply lines must be fitted.



The figures in this manual are based on the external view of a standard model. Consequently, the shape may differ from that of the air conditioner you have selected.

Caution:

1. Never fail to have an individual power circuit specifically for the air conditioner. As for the method of wiring, refer to the circuit diagram posted on the inside of the access door .

2.Comfirm that the cable thickness is as specified in the power source specification. (See the cable specification table below)

3.Check the wires and make sure that they are all tightly fastened after cable connection.

4. Be sure to install an earth leakage circuit breaker in wet or moist area.

Wire Gauge Requirements

Circuit Amp	Wire Gauge at Different Wire Lengths			
	200ft	150ft	100ft	50ft
15	6	8	10	14
20	4	6	8	12
25	4	6	8	10
30	4	4	6	10
35	3	4	6	8
40	3	4	6	8
45	2	3	4	6
50	2	3	4	6

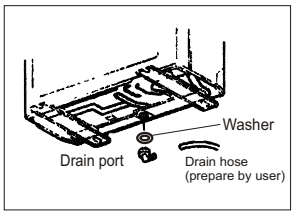
(Nec,105c/221 F Type Copper Conductors)

Installation Instructions

Outdoor Unit Installation

1.Install Drain Port and Drain Hose (for heat-pump model only)

The condensate drains from the outdoor unit when the unit operates in heating mode. In order to protect the environment, install a drain port and a drain hose to direct the condensate water. Just install the drain port and rubber washer to the chassis of the outdoor unit, then connect a drain hose to the port as the right figure shown.



2. Install and Fix Outdoor Unit

Fix with bolts and nuts tightly on a flat and strong floor.
If installed on the wall or roof, make sure to fix the supporter well to prevent it from shaking due to serious vibration or strong wind.

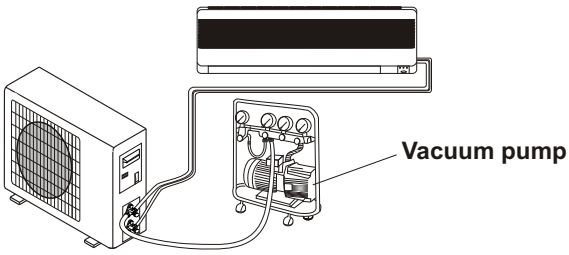
3. Outdoor Unit Piping Connection

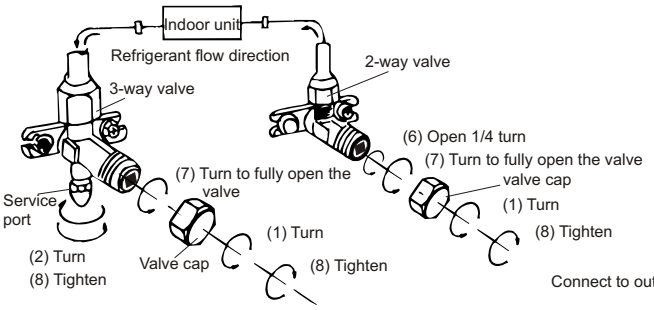
- Remove the valve caps from the 2-way and 3-way valve.
- Connect the pipes to the 2-way and 3-way valves separately according to the required torque.

4. Outdoor Unit Cable Connection (see previous page)

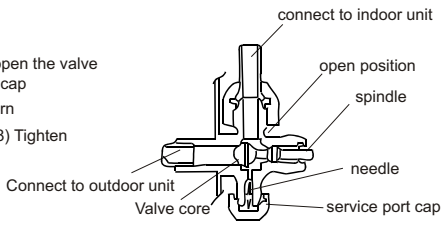
Air Purging

The air which contains moisture remaining in the refrigeration cycle may cause a malfunction on the compressor. After connecting the indoor and outdoor units, evacuate air and moisture from refrigerant cycle using a vacuum pump, as shown below.





3-way valve diagram



Note: To protect the environment, be sure not to discharge the refrigerant to the air directly.

Installation Instructions

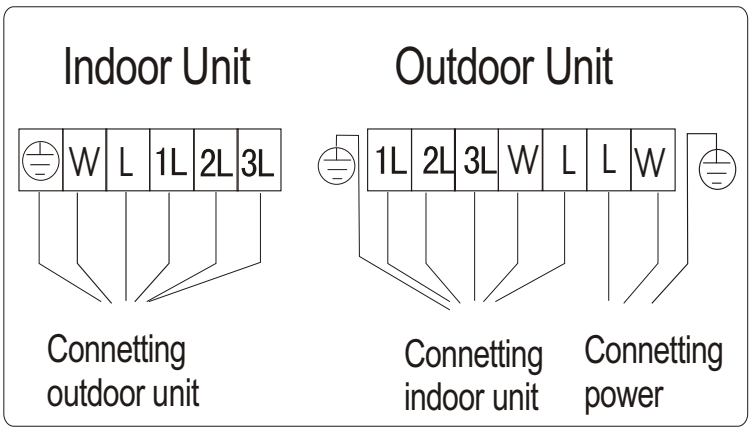
Interconnection Cable

(1)Take off the cover for Interconnection cable of outdoor unit.
(2)Take off the block for Interconnection cable, then put the core of the power wire to the terminal and fix it according to the diagrams pasted to indoor and outdoor unit separately.
(3)Fix the accessory cable with the Interconnection cable block.
(4) Confirm the fixing of the accessory cable is ok.
(5)Fix the cover for Interconnection cable on.

Diagram for installation of Interconnection cable
(please see the pasted diagram instruction on the body first)

Circuit Diagram

09K、12K、18K、24K indoor and outdoor interconnection cable sketch map



Cooling & Heating

Note: Some models are designed without the conneting terminal in indoor unit,please subject to the connetion diagram of the product.

Installation Instructions

How to Purge Air Tubes

(1). Unscrew and remove caps from 2 and 3-way valves.
(2). Unscrew and remove cap from service valve.
(3). Connect vacuum pump flexible hose to the service valve.
(4). Start vacuum pump for 10-15 minutes until reaching a vacuum of 30" Hg absolutes.
(5). With vacuum pump still running close the low pressure knob on vacuum pump manifold. Then stop vacuum pump.
(6). Open 2-way valve 1/4 turn then close it after 10 seconds. Check tightness of all joints using liquid soap or an electronic leak detector.
(7). Turn 2 and 3-way valves stem to fully the valves. Disconnect vacuum pump flexible hose.
(8). Replace and tighten all valve caps.

Test Running

- Connect to the power source, check if the function selection keys on the remote controller are working properly.
- Check if the room temperature adjustments and timer settings are working properly.
- Check if the drain is open.
- Check if there is any abnormal noise or vibration during operation.
- Check if there is leakage of refrigerant.

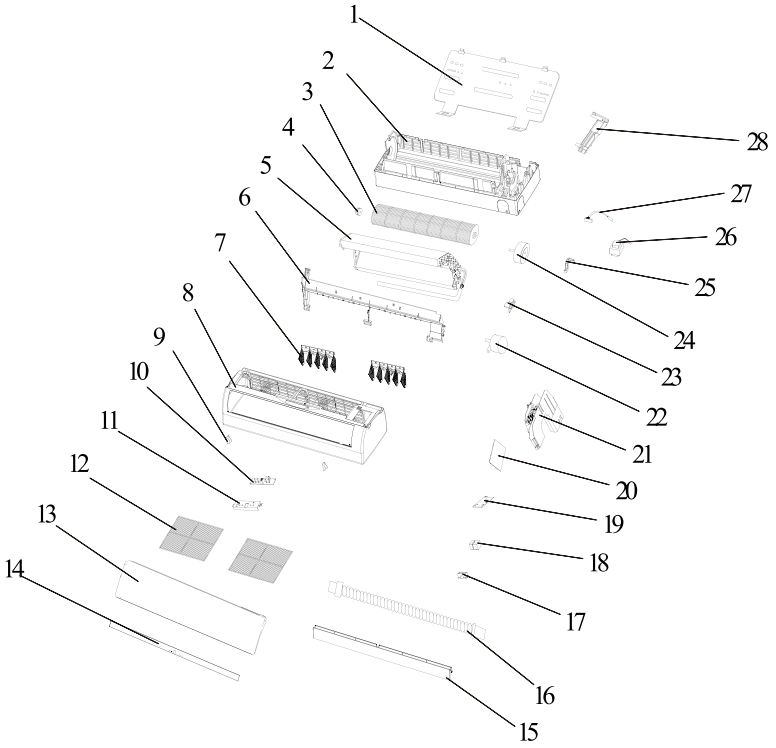
ATTENTION:
If there is no power plug along with the air conditioner,The power cord should be connected to an air switch ,whose current carrying capacity should be more than 20A and the minimum open-circuit distance among the live polar pole,the neutral polar pole and the ground polar pole should be more than 1".If any malfuctions,please cut off the supply by the air switch and contact the manufacturer or its service agent.
The appliance shall be installed in accordance with national wiring regulations.
If the supply cord is damaged. It is better to be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.

NOTE

- Please read this manual before installing and using it.
- Do not let air enter the refrigeration system or discharge refrigerant when moving the air conditioner.
- Test run the air conditioner after finishing installation, and record details of operation.
- Type of fuse used on indoor unit controller for 7K,9K,12K 15K,16K,18K, 22K,24K,30K is 50T with rating 3.15 A,250V;Type of fuse used on inverter outdoor unit controller for 7K,9K,12K is 61T with rating 15 A,250V,for 18K,22K,24K is 65TS with rating 25A,250V.
- The fuse for the whole unit is to be provided by the user according to the current at maximum power input or use other over-current protective device instead.
- Accessibility to the plug must be guaranteed even after the installation of the appliance to disconnect it in case of need. If not possible, connect appliance to a double-pole switching device with contact separation of at least 1 " placed in an accessible position even after installation.
- Please make replacing with the special assembly purchasing from our factory or our service center if something wrong with Interconnection cable.
- The security out static air pressure for our products is 0.8-1.05 * standard pressure.
- The biggest length for our connection pipe can be 49 feet. More refrigerant is necessary for per foot if the length is over 21 feet.

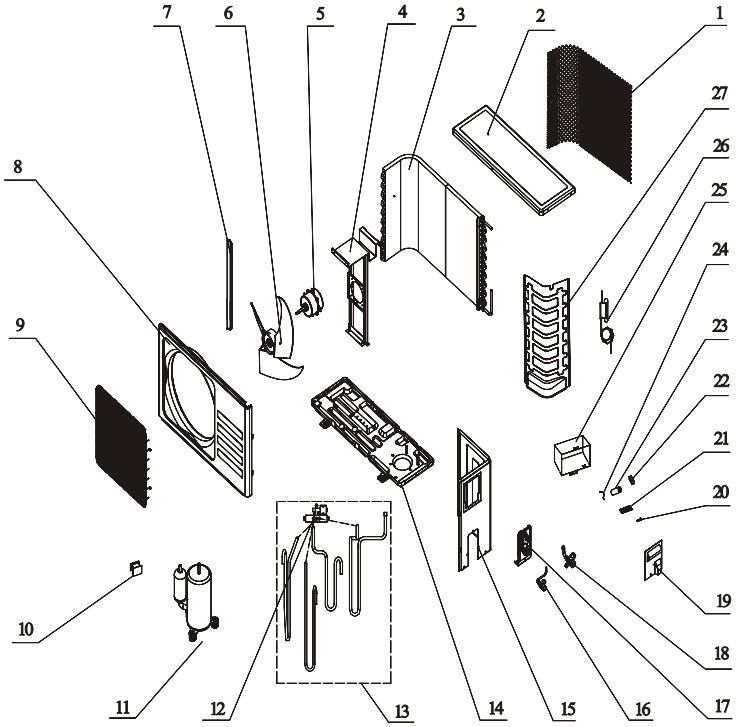
- Please do not place valuable things under the unit after installation.

MODEL:KFTHP-09-ID
INDOOR UNIT



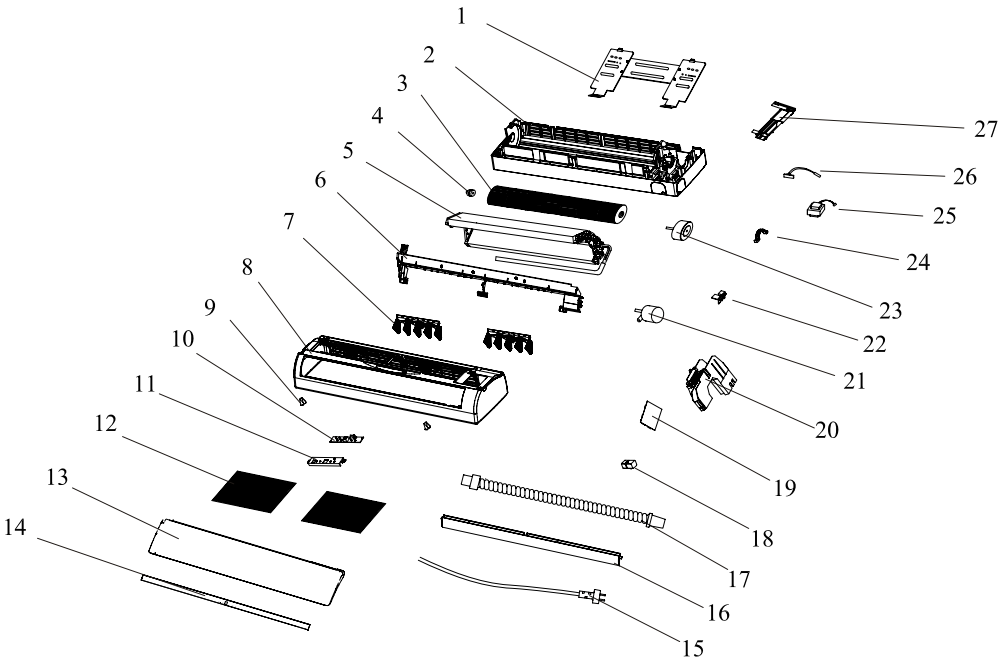
No.	Part No.	Part Name	Q'ty	Remark
1	1080030021	Installation Plate	1	
2	1070350170	Base	1	
3	1070020029	Cross Fan	1	
4	1070100010	Bearing Mount	1	
5	1110050332	Evaporator	1	
6	1070350171	Water Drainage Assembly	1	
7	1070350175	Vertical Vane Assembly	14	
8	1070350213	Face Frame	1	
9	1070350183	Screw Cover	2	
10	1070320696	Display PCB	1	
11	1070350178	Display PCB Box	1	
12	1070300010	Air Filter	2	
13	1070350503	Front Panel	1	
14	1070350223	Display PCB Cover	1	
15	1070350174	Vane	1	
16	1070110011	Drainage Hose	1	
17	1070040004	Cable Clamp	1	
18	1170200041	Terminal	1	
19	1070250109	Terminal Fixing Board	1	
20	1090350174	Main PCB	1	
21	1070350179	Electrical Box	1	
22	1170020011	Vane Motor	1	
23	1073010501	Sensor Holder	1	
24	1170040070	Indoor Motor	1	
25	1070320111	Indoor Motor Cover	1	
26	1170240004	Transformer	1	
27	1170230001	Indoor Sensor Assembly	1	
28	1070350169	In And Out Pipe Fixer	1	
29	1090050347	Remote Controller	1	
30	1070060003	Remote Controller Supporter	1	
31	1190130455	Indoor Carton	1	
32	1190060103	Left Foaming	1	
33	1190060104	Right Foaming	1	

MODEL: KFTHP-09-OD
OUTDOOR UNIT



No.	Part No.	Part Name	Q'ty	Remark
1	1071990040	Grille	1	
2	1080050031	Top Cover	1	
3	1110060867	Condenser	1	
4	1080050004	Outdoor Motor Supporter	1	
5	1170040072	Outdoor Motor	1	
6	1070030033	Propeller Fan	1	
7	1080050028	Left Grille Supporter	1	
8	1080050032	Front Plate	1	
9	1080320112	Fan Guard	1	
10	1170150010	AC Contactor	1	
11	1100030065	Compressor And It Accessories	1	
12	1120251697	4-way Valve	1	
13	1120251696	4-way Valve Assembly	1	
14	1210250136	Base	1	
15	1080050029	Right Plate	1	
16	1120120021	Two-way Valve	1	
17	1080050030	Valve Supporter	1	
18	1120130036	Three-way Valve	1	
19	1081990107	Electrical Box Cover	1	
20	1074060118	Cable Clamp	1	
21	1170200054	Terminal	1	
22	1170100034	Fan Motor Capacitor	1	
23	1170100022	Compressor Capacitor	1	
24	1080010006	Capacitor Strip	1	
25	1300350813	Electrical Parts Box	1	
26	1120251701	Capillary Assembly	1	
27	1080170001	Partition plate	1	
28	1174561802	Outdoor sensor	1	
29	1190070020	Base Carton	1	
30	1190130456	Cabinet Carton	1	
31	1190070022	Base Foaming	1	
32	1190070021	Cover Forming	1	

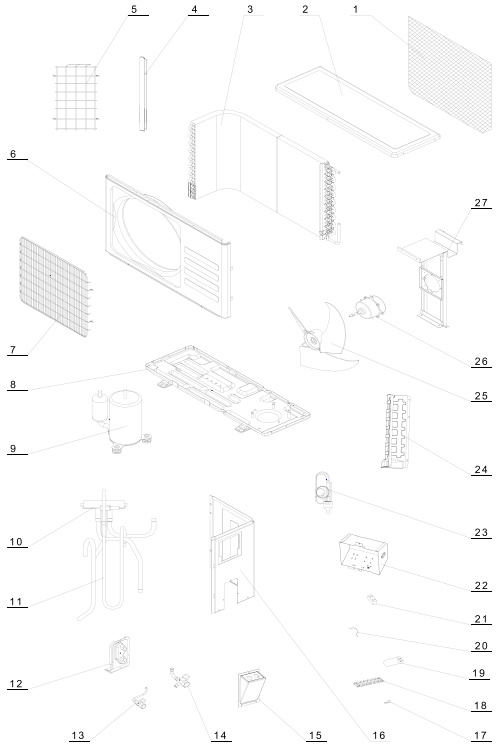
MODEL: KFTZHP-12-ID
INDOOR UNIT



No.	Part No.	Part Name	Q'ty	Remark
1	1170240001	Transformer	1	
2	1170230001	Indoor Sensor Assembly	1	
3	1070350245	In And Out Pipe Fixer	1	
4	1080030021	Installation Plate	1	
5	1070350243	Base	1	
6	1070020024	Cross Fan	1	

7	1070100010	Bearing Mount	1	
8	1090020030	Heater	1	
9	1170030065	Indoor Motor	1	
10	1070350152	Indoor Motor Cover	1	
11	1070350119	Electrical Box	1	
12	1090500224	Main PCB	1	
13	1070350235	Electrical Box Cover	1	
14	1070040005	Cable Clamp Base	1	
	1070040006	Cable Clamp Cover	1	
15	1110050903	Evaporator	1	
16	1070350137	Water Drainage Assembly	12	
17	1070350140	Vane	1	
18	1070110011	Drainage Hose	1	
19	1070350155	Evaporator Fastness Clamp	1	
20	1170020011	Vane Motor	1	
21	1070500250	Face Frame	1	
22	1070190012	Left Air Filter	1	
23	1070450115	Front Panel	1	
24	1071990048	Display PCB Cover	1	
25	1070500246	Servicing Cover	1	
26	1070350135	Screw Cover	3	
27	1070190013	Right Air Filter	1	
28	1090500118	Display PCB	1	
29	1070250425	Display PCB Box	1	
30	1090050318	Remote Controller	1	
	1070060003	Remote Controller Supporter	1	
32	1190470001	Indoor Carton	1	
33	1190060054	Left Foaming	1	
34	1190060055	Right Foaming	1	

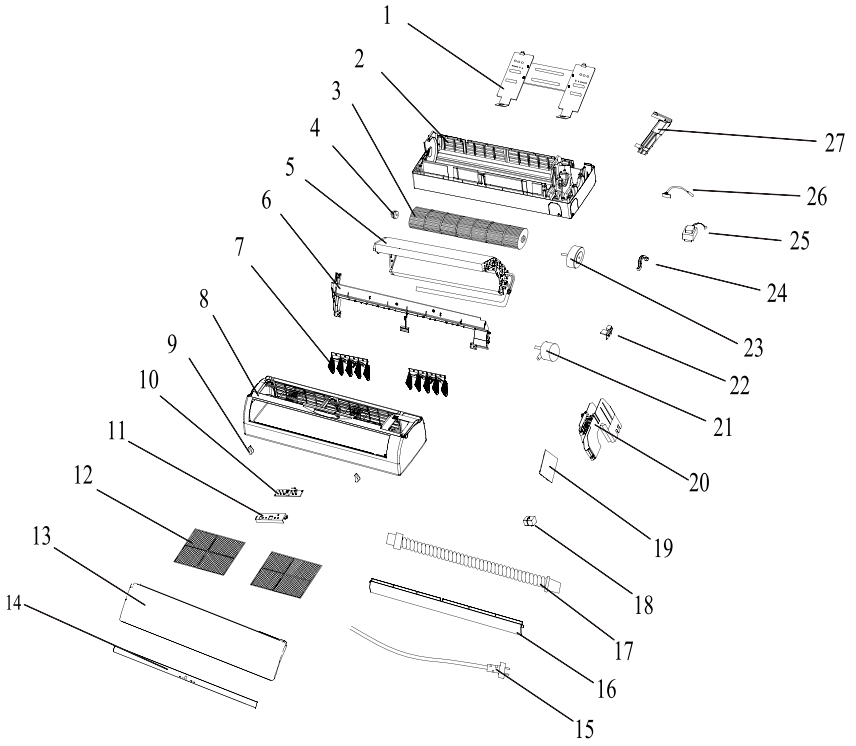
MODEL:KFTZHP-12-OD
OUTDOOR UNIT



No.	Part No.	Part Name	Q'ty	Remark
1	1170240001	Transformer	1	
2	1170230001	Indoor Sensor Assembly	1	
3	1070350245	In And Out Pipe Fixer	1	
4	1080030021	Installation Plate	1	
5	1070350243	Base	1	
6	1070020024	Cross Fan	1	

7	1070100010	Bearing Mount	1	
8	1090020030	Heater	1	
9	1170030065	Indoor Motor	1	
10	1070350152	Indoor Motor Cover	1	
11	1070350119	Electrical Box	1	
12	1090500224	Main PCB	1	
13	1070350235	Electrical Box Cover	1	
14	1070040005	Cable Clamp Base	1	
	1070040006	Cable Clamp Cover	1	
15	1110050903	Evaporator	1	
16	1070350137	Water Drainage Assembly	12	
17	1070350140	Vane	1	
18	1070110011	Drainage Hose	1	
19	1070350155	Evaporator Fastness Clamp	1	
20	1170020011	Vane Motor	1	
21	1070500250	Face Frame	1	
22	1070190012	Left Air Filter	1	
23	1070450115	Front Panel	1	
24	1071990048	Display PCB Cover	1	
25	1070500246	Servicing Cover	1	
26	1070350135	Screw Cover	3	
27	1070190013	Right Air Filter	1	
28	1090500118	Display PCB	1	
29	1070250425	Display PCB Box	1	
30	1090050318	Remote Controller	1	
31	1070060003	Remote Controller Supporter	1	
32	1190470001	Indoor Carton	1	
33	1190060054	Left Foaming	1	
34	1190060055	Right Foaming	1	

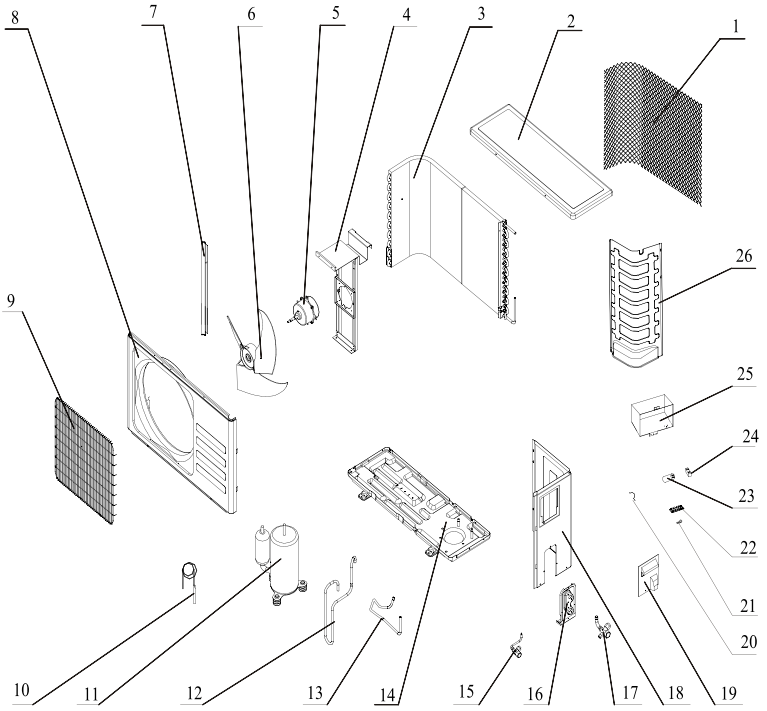
MODEL:KFTHP-12-ID
INDOOR UNIT



No.	Part No.	Part Name	Q'ty	Remark
1	1080030008	Installation Plate	1	
2	1210320107	Base	1	
3	1070020026	Cross Fan	1	
4	1070100010	Bearing Mount	1	
5	1210320601	Evaporator	1	
6	1210320108	Water Drainage Assembly	1	
7	1070320105	Vertical Vane Assembly	10	
8	1070320204	Face Frame	1	
9	1070320112	Screw Cover	2	

10	1090250119	Display PCB	1	
11	1070250120	Display PCB Box	1	
12	1070320109	Air Filter	2	
13	1070321326	Front Panel	1	
14	1070321240	Display PCB Cover	1	
15	1170120135	Power Supply Cord	1	
16	1070320104	Vane	1	
17	1070110011	Drainage Hose	1	
18	1170200039	Terminal	1	
19	1090350031	Main PCB	1	
20	1070320113	Electrical Box	1	
21	1170020011	Vane Motor	1	
22	1073010501	Sensor Holder	1	
23	1170030067	Indoor Motor	1	
24	1070320111	Indoor Motor Clamp	1	
25	1170240001	Transformer	1	
26	1170230001	Indoor Sensor Assembly	1	
27	1070320101	In And Out Pipe Fixer	1	
28	1090050604	Remote Controller	1	
29	1070060003	Remote Controller Supporter	1	
30	1190130773	Indoor Carton	1	
31	1301990351	Left Foaming	1	
32	1301990352	Right Foaming	1	

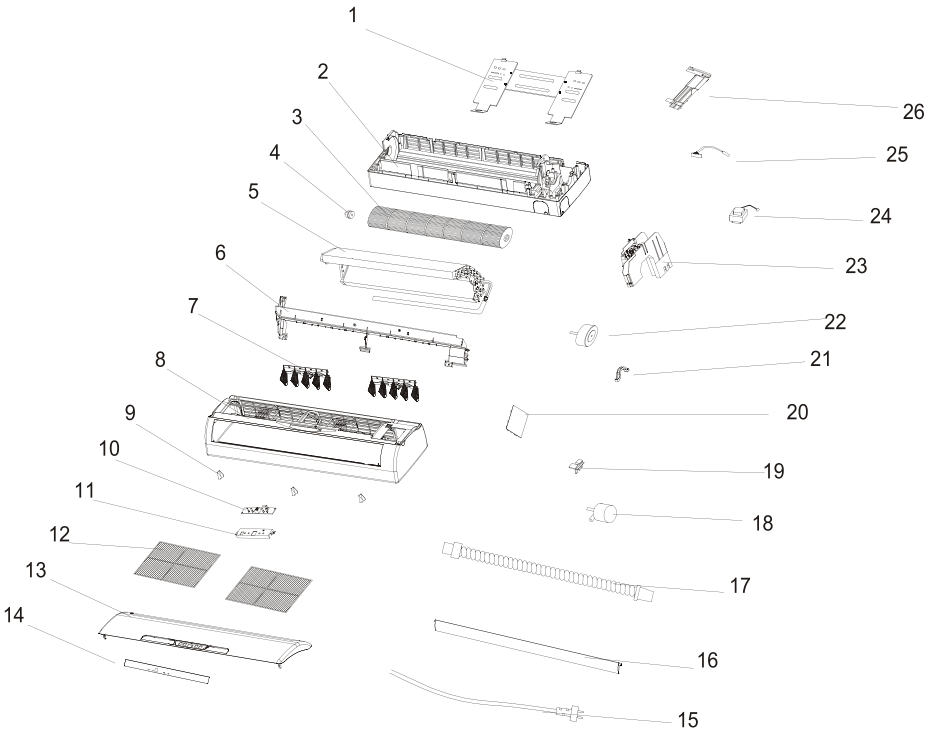
MODEL:KFTHP-12-OD
OUTDOOR UNIT



No.	Part No.	Part Name	Q'ty	Remark
1	1071990040	Grille	1	
2	1080050031	Top Cover	1	
3	1110060384	Condenser	1	
4	1080050004	Outdoor Motor Supporter	1	
5	1170040069	Outdoor Motor	1	
6	1070030038	Propeller Fan	1	
7	1080050001	Left Grille Supporter	1	
8	1080050032	Front Plate	1	
9	1080320112	Fan Guard	1	

10	1120350855	Capillary Assembly	1	
11	1100110022	Compressor And It Accessories	1	
12	1120350923	Discharge Pipe	1	
13	1120350922	Suction Pipe	1	
14	1080050074	Base	1	
15	1120120016	Two-way Valve	1	
16	1080050003	Valve Supporter	1	
17	1120130024	Three-way Valve	1	
18	1080050029	Right Plate	1	
19	1073551103	Electrical Box Cover	1	
20	1080010006	Capacitor Strip	1	
21	1070040003	Cable Clamp(Φ 8)	1	
22	1170500130	Terminal	1	
23	1170100003	Compressor Capacitor	1	
24	1170100027	Fan Motor Capacitor	1	
25	1081990010	Electrical Parts Box	1	
26	1080170001	Partition plate	1	
27	1190070020	Base Carton	1	
28	1190070002	Cabinet Carton	1	
29	1190070022	Base Foaming	1	
30	1190070021	Cover Forming	1	

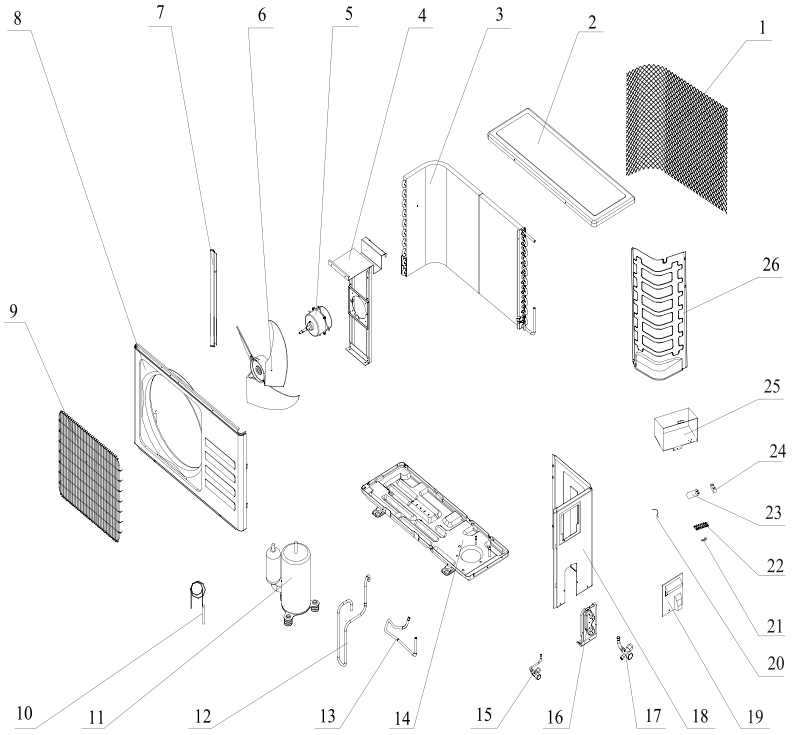
MODEL:KFTHP-18-ID
INDOOR UNIT



No.	Part No.	Part Name	Q'ty	Remark
1	1080030021	Installation Plate	1	
2	1070350243	Base	1	
3	1070020024	Cross Fan	1	
4	1070100010	Bearing Mount	1	
5	1110050837	Evaporator	1	
6	1070350137	Water Drainage Assembly	1	
7	1070350141	Vertical Vane Assembly	12	
8	1070500250	Face Frame	1	
9	1070350135	Screw Cover	3	
10	1090250119	Display PCB	1	

11	1070250120	Display PCB Box	1	
12	1070310003	Left Air Filter	1	
	1070310004	Right Air Filter	1	
13	1070450408	Front Panel	1	
14	1070450573	Display PCB cover	1	
15	1170120135	Power Supply Cord	1	
16	1070350140	Vane	1	
17	1070110011	Drainage Hose	1	
18	1170020011	Vane Motor	1	
19	1073010501	Sensor Holder	1	
20	1090430106	Main PCB	1	
21	1070350152	Indoor Motor Cover	1	
22	1170030065	Indoor Motor	1	
23	1070350119	Electrical Box	1	
24	1170240001	Transformer	1	
25	1170230001	Indoor Sensor Assembly	1	
26	1070350245	In And Out Pipe Fixer	1	
27	1170200039	Terminal	1	
28	1090050604	Remote Controller	1	
29	1070060003	RemoteController Supporter	1	
30	1190130771	Indoor Carton	1	
31	1190060054	Left Foaming	1	
32	1190060055	Right Foaming	1	
33	1190060057	Middle PasteboardSupporter	1	

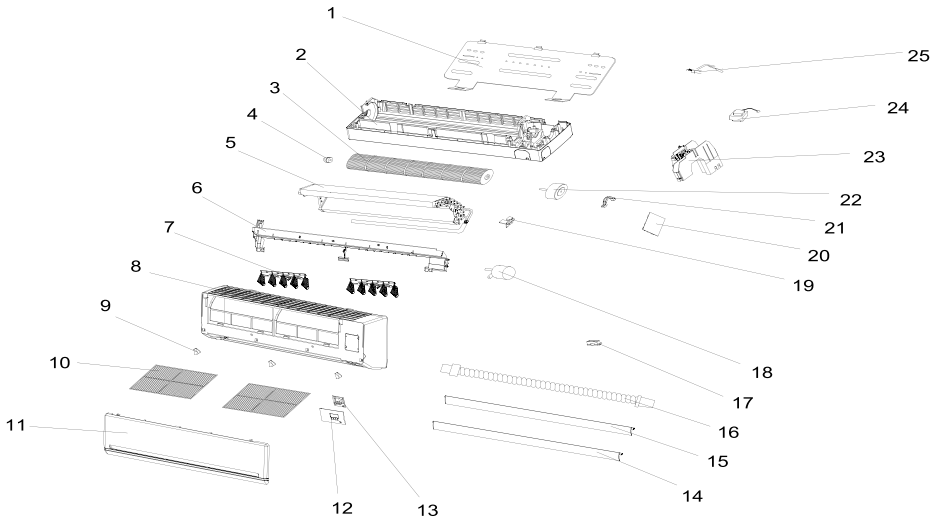
MODEL:KFTHP-18-OD
OUTDOOR UNIT



No.	Part No.	Part Name	Q'ty	Remark
1	1083520101	Grille	1	
2	1070500400	Top Cover	1	
3	1110061268	Condenser	1	
4	1081990060	Outdoor Motor Supporter	1	
5	1170040067	Outdoor Motor	1	
6	1070030040	Propeller Fan	1	
7	1070500397	Left Grille Supporter	1	
8	1081990257	Front Plate	1	
9	1071990096	Fan Guard	1	
10	1120501679	Capillary Assembly	1	

11	1100060065	Compressor And It Accessories	1	
12	1120501093	Discharge Pipe	1	
13	1120501092	Suction Pipe	1	
14	1080500252	Base	1	
15	1120120016	Two-way Valve	1	
16	1070500399	Valve Supporter	1	
17	1120130024	Three-way Valve	1	
18	1070500398	Right Plate	1	
19	1073551103	Electrical Box Cover	1	
20	1080010006	Capacitor Strip	1	
21	1070040002	Cable Clamp(ϕ 7)	1	
22	1170500130	Terminal	1	
23	1170100026	Compressor Capacitor	1	
24	1170100030	Fan Motor Capacitor	1	
25	1081990010	Electrical Parts Box	1	
26	1081990071	Partition plate	1	
27	1190070064	Base Carton	1	
28	1190530012	Cabinet Carton	1	
29	1190070066	Base Foaming	1	
30	1190070124	Cover Forming	1	

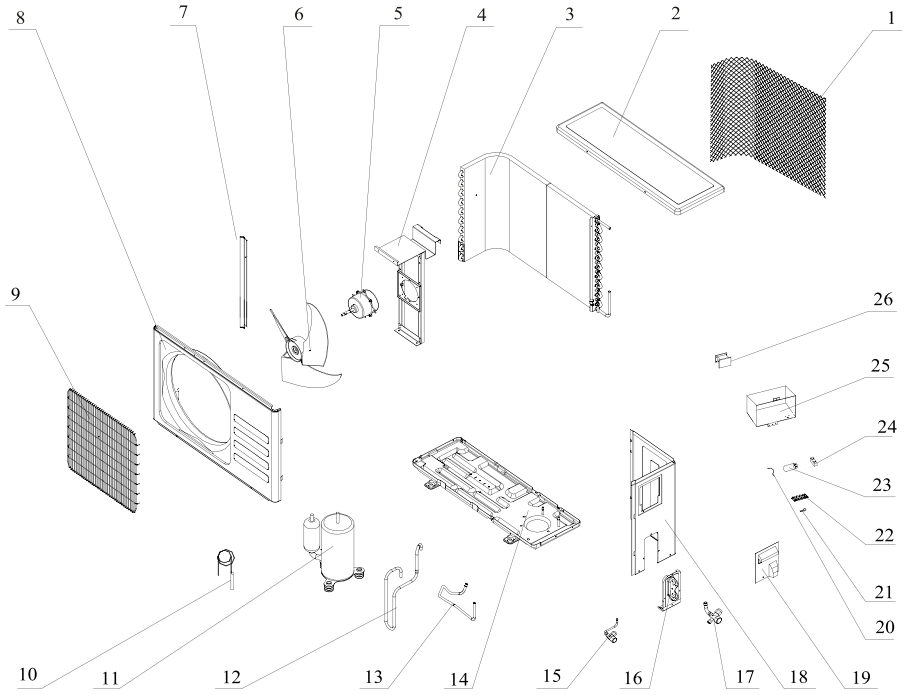
MODEL:KFTHP-24-ID
INDOOR UNIT



No.	Part No.	Part Name	Q'ty	Remark
1	1080030001	Installation Plate	1	
2	1213090101	Base	1	
3	1070020014	Cross Fan	1	
4	1070100010	Bearing Mount	1	
5	1210700205	Evaporator	1	
6	1213090102	Water Drainage Assembly	1	
7	1073090106	Vertical Vane Assembly A	1	
	1073090107	Vertical Vane Assembly B	1	

8	1070700364	Face Frame	1	
9	1073090111	Screw Cover	3	
10	1073090112	Left Air Filter	1	
	1073090113	Right Air Filter	1	
11	1070501119	Front Panel	1	
12	1300501650	Display PCB Cover	1	
13	1090500507	Display PCB (digital)	1	
14	1073090108	Vane A	1	
15	1073090125	Vane B	1	
16	1070110011	Drainage Hose	1	
17	1074060118	Cable Clamp	1	
18	1170020011	Vane Motor	2	
19	1073010501	Sensor Holder	1	
20	1090700113	Main PCB(digital)	1	
21	1073090120	Indoor Motor Cover	1	
22	1170030054	Indoor Motor	1	
23	1073090121	Electrical Box	1	
24	1173090107	Transformer	1	
25	1170230001	Indoor Sensor Assembly	1	
28	1090050604	Remote Controller	1	
29	1070060003	Remote Controller Supporter	1	
30	1190130769	Indoor Carton	1	
31	1190060070	Left Foaming	1	
32	1190060069	Right Foaming	1	
33	1190060021	Middle Pasteboard Supporter	1	
34	1190060002	Middle Foaming Supporter	1	

MODEL:KFTHP-24-OD
OUTDOOR UNIT

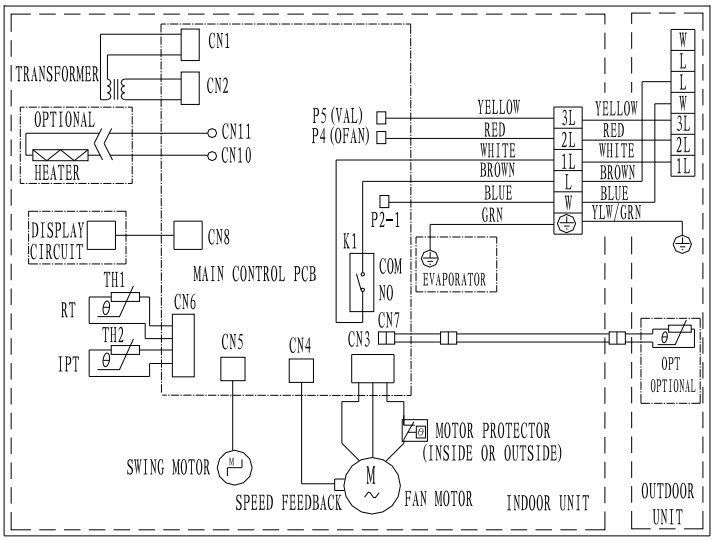


No.	Part No.	Part Name	Q'ty	Remark
1	1071990041	Grille	1	
2	1080020006	Top Cover	1	
3	1110060396	Condenser	1	
4	1081990042	Outdoor Motor Supporter	1	
5	1170040107	Outdoor Motor	1	
6	1170120146	Propeller Fan	1	
7	1080020008	Left Grille Supporter	1	
8	1080020010	Front Plate	1	
9	1071990045	Fan Guard	1	
10	1120700709	Capillary Assembly	1	

11	1100030091	Compressor And It Accessories	1	
12	1120700668	Discharge Pipe	1	
13	1120700435	Suction Pipe	1	
14	1081990252	Base	1	
15	1120120011	Two-way Valve	1	
16	1080020009	Valve Supporter	1	
17	1120130013	Three-way Valve	1	
18	1080020007	Right Plate	1	
19	1073551103	Electrical Box Cover	1	
20	1080010004	Capacitor Strip	1	
21	1074060118	Cable Clamp	1	
22	1170200055	Terminal	1	
23	1170100033	Compressor Capacitor	1	
24	1170100030	Fan Motor Capacitor	1	
25	1081990049	Electrical Parts Box	1	
26	1174561801	AC Contactor	1	
27	1190060191	Base Carton	1	
28	1190130768	Cabinet Carton	1	
29	1190060191	Base Foaming	1	
30	1190070052	Cover Forming	1	

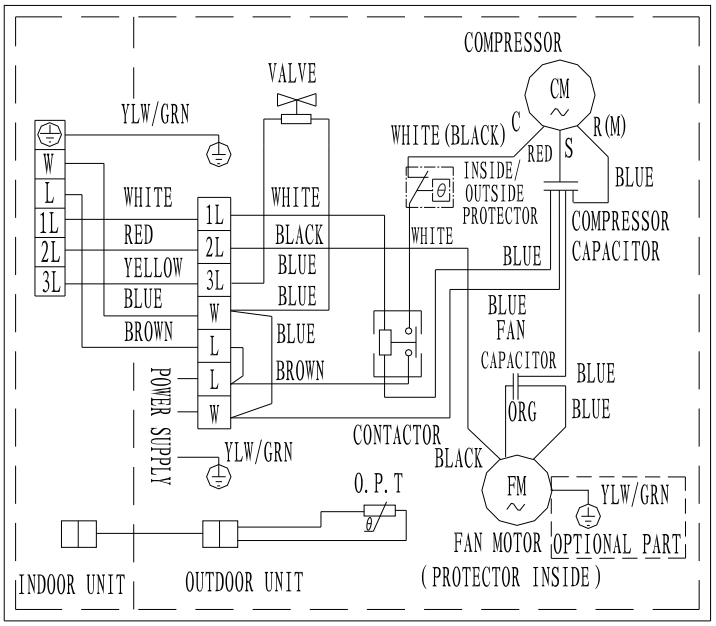
Model: KFTHP-09-ID

ELECTRICAL SCHEMATIC DIAGRAM OF THE INDOOR UNIT



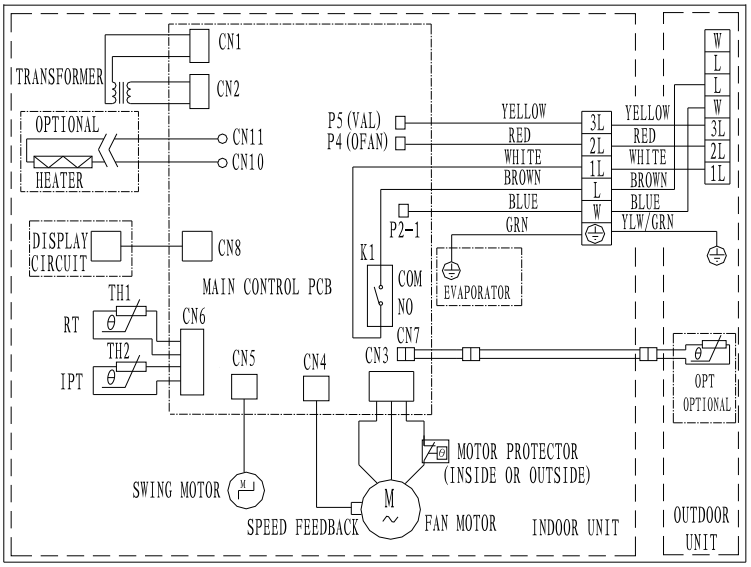
Model: KFTHP-09-OD

ELECTRICAL SCHEMATIC DIAGRAM OF THE OUTDOOR UNIT



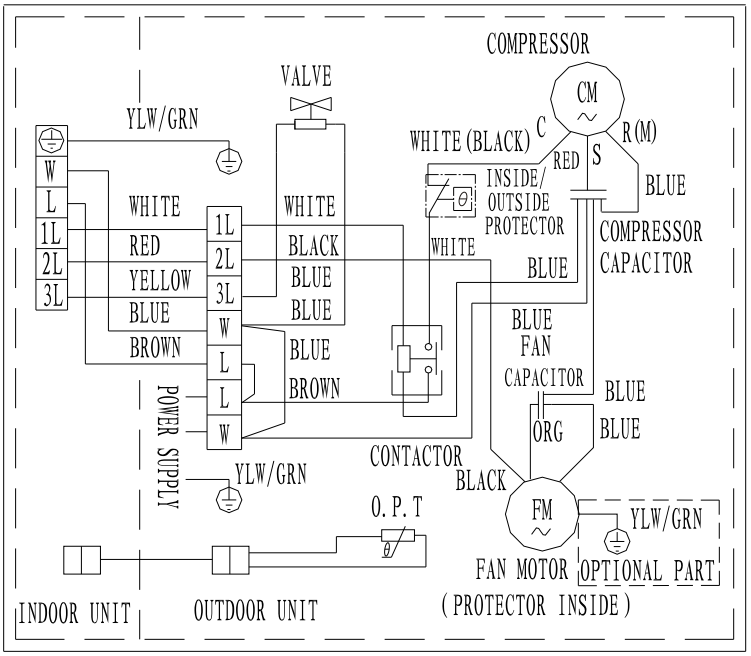
Model: KFTZHP-12-ID

ELECTRICAL SCHEMATIC DIAGRAM OF THE INDOOR UNIT



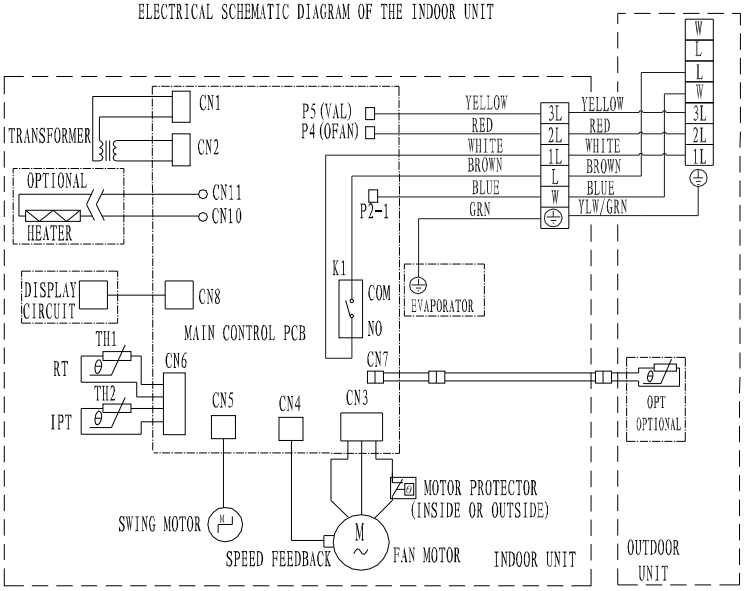
Model: KFTZHP-12-OD

ELECTRICAL SCHEMATIC DIAGRAM OF THE OUTDOOR UNIT



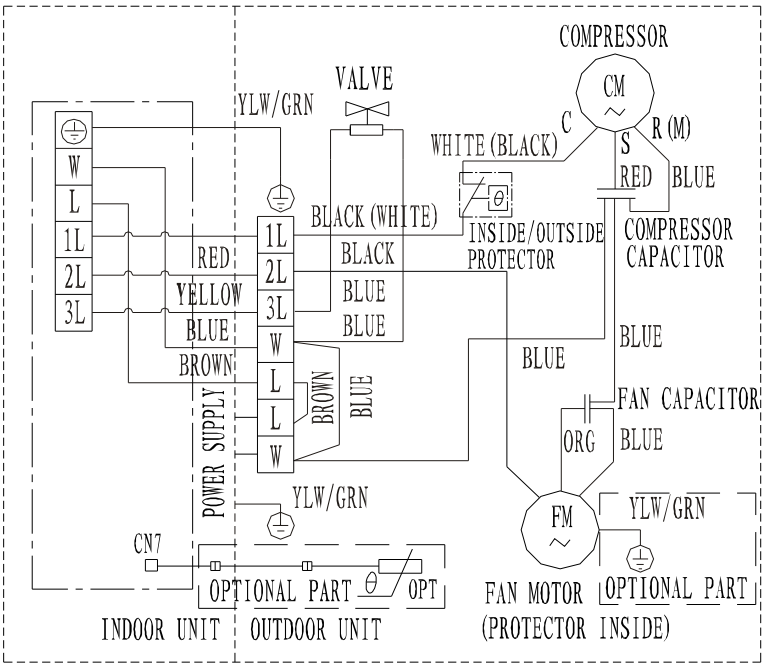
Model:KFTHP-12-ID

ELECTRICAL SCHEMATIC DIAGRAM OF THE INDOOR UNIT



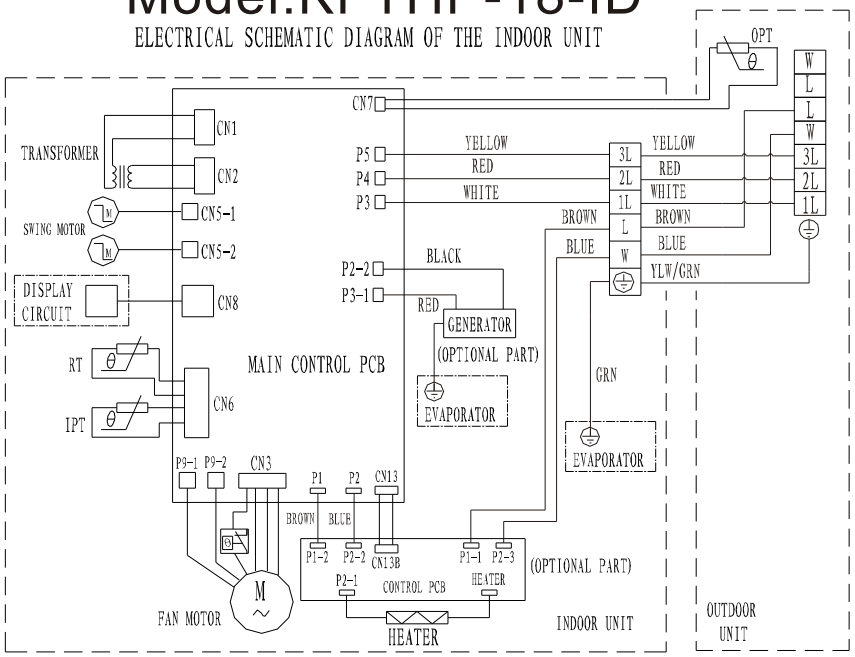
Model:KFTHP-12-OD

ELECTRICAL SCHEMATIC DIAGRAM OF THE OUTDOOR UNIT



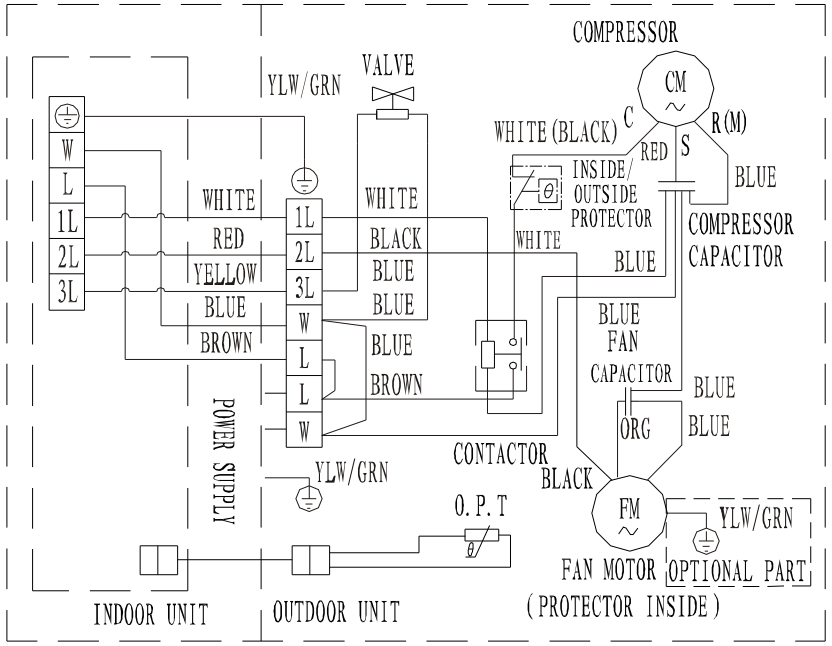
Model:KFTHP-18-ID

ELECTRICAL SCHEMATIC DIAGRAM OF THE INDOOR UNIT



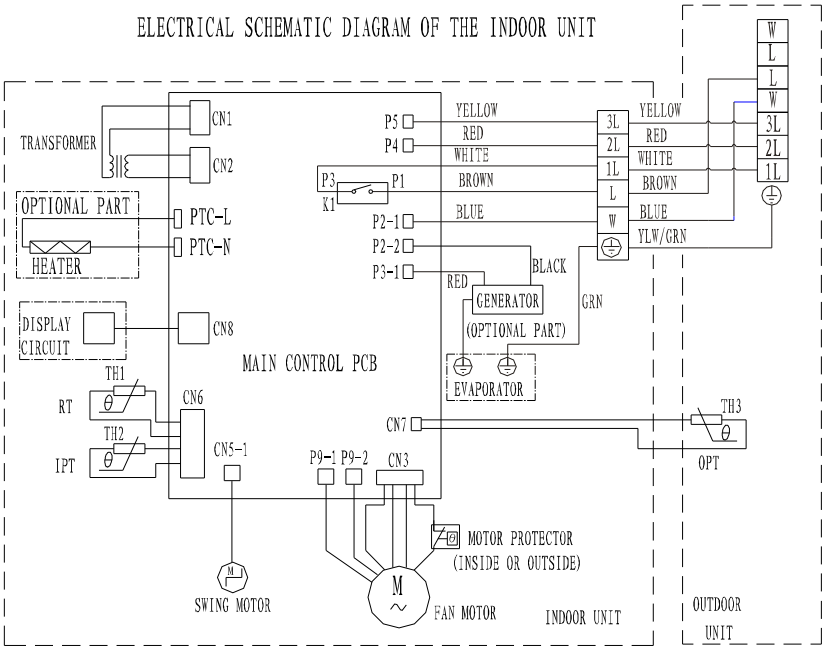
Model:KFTHP-18-OD

ELECTRICAL SCHEMATIC DIAGRAM OF THE OUTDOOR UNIT



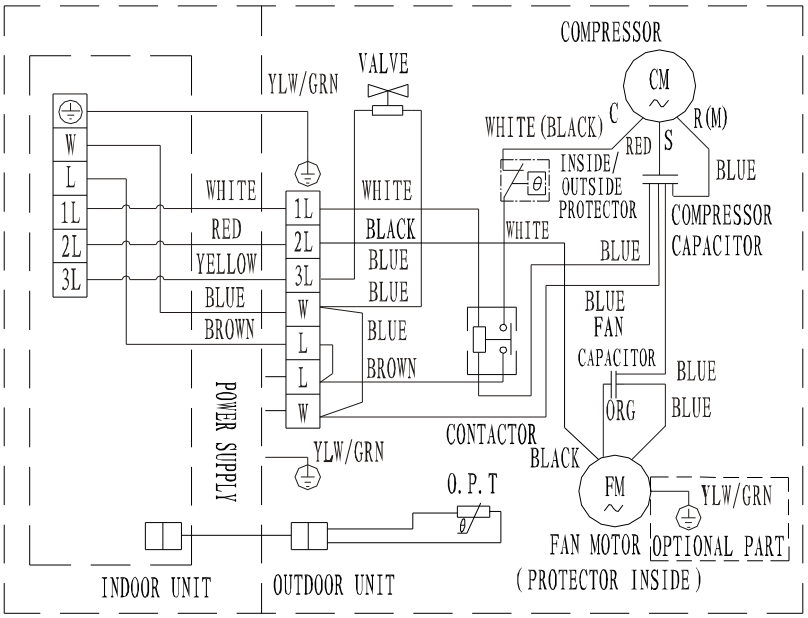
Model:KFTHP-24-ID

ELECTRICAL SCHEMATIC DIAGRAM OF THE INDOOR UNIT



Model:KFTHP-24-OD

ELECTRICAL SCHEMATIC DIAGRAM OF THE INDOOR UNIT



SPECIFICATION						
MODEL		KFTHP-09	KFTZHP-12	KFTHP-12	KFTHP-18	KFTHP-24
Funcion		COOLING AND HEATING	COOLING AND HEATING	COOLING AND HEATING	COOLING AND HEATING	COOLING AND HEATING
Rated Voltage		115V	115V	208-230V	208-230V	208-230V
Rated Frequency(Hz)		60	60	60	60	60
Cooling/Heating Capacity(BTU)		9000/9500	12500/12000	12500/(12000+3070)	18000/(17300+3412)	24000/(23500+3412)
SEER		13.5	13.0	13.0	13.0	13.0
Declared EER/Actual EER		11.6/11.3	10.9/10.4	12.3/11.3	11.6/11.3	11.6/10.9
Declared COP/Actual COP (W/W.h)		3.6/3.3	3.7/3.6	2.6/3.5	2.4/3.3	2.5/3.2
Cooling/Heating Power Input(W)		800	1000	1000/(1000+900)	1550/(1500+1000)	2050/(2050+1000)
Cooling/Heating Rated Current(A)		7.3/7.4	4.6	4.6/(4.6+4.1)	6.7/(6.4+4.5)	9.7/(9.7+4.5)
Air Flow Volume(CFM)		325/305/290	430/420/400	430/420/400	590/560/540	854/826/800
HSPF		9.0	8.1	8.7	7.7	7.8
Dehumidifying Volume(pt/h)		1.41	1.76	2.11	2.64	2.64
Auto Restart		Yes	Yes	Yes	Yes	Yes
Breaker Size (A)		15A	15A	10A	15A	20A
Minmiunm Circult Ampacity		9.5A	6.35	6.35	9.55	12.2
Indoor	Fan Motor Speed(r/min)(H/M/L)	1300/1200/1100	1300/1220/1150	1300/1220/1150	1550/1230/1110	1550/1230/1110
	Output of Fan Motor(W)	12	18	18	60	54
	Fan Motor Capacitor(uf)	3	1.5	1.5	2	3
	Fan Motor RAL(A)	0.28	0.14	0.14	0.77	0.75
	Coil(L×H×W)	24.29x12.4x1	27.76x12.4x1	27.76x12.4x1	31.38x14.06x1	37.87x16.54x1
	Evaporator Fan Motor(A)	0.36	0.14	0.14	0.77	0.75
	Fuse(A)	6	6	6	6	6
	Noise Level dB (A)(H/M/L)	40/38/36	42/40/38	42/40/38	56/54/50	57/55/52
	Indoor Unit Dimension(W×H×D)(inch)	31.52x11.03x7.29	35×11×8.25	35×11×8.25	40×12.25×8.75	48.13×12.75×9.64
	Dimension of Package(W×H×D)(inch)	34.87x14.42x10.95	39×14×11.5	39×14×11.5	43.25×15.75×11.75	52×16.5×13.5
	Net Weight/Gross Weight(LB)	20.5/27	21.5/28	21.5/28	31/39.5	40.5/52.5
outdoor	Outdoor Operating Range	24℉ to 110 ℉	24℉ to 110 ℉	24℉ to 110 ℉	24℉ to 110 ℉	24℉ to 110 ℉
	Condenser	aluminum fin-copper tube	aluminum fin-copper tube	aluminum fin-copper tube	aluminum fin-copper tube	aluminum fin-copper tube
	Row-Fin Gap(inch)	2-0.059	2-0.059	2-0.059	2-0.051	2-0.059
	Coil(L×H×W)(inch)	27.87x20.8x1	30.51x20.08x1	30.51x20.08x1	35.83x23.98x1.5	39.96x30x1.5
	Fan motor Speed (rpm)	860	860	860	750	860
	Output of Fan Motor(w)	31	31	31	76	150
	Fan Motor RAL(A)	0.72	0. 32	0. 32	0. 86	1.3
	Fan Motor Capacitor(uf)	5	1.5	1.5	4.0	8.0
	Fan Type-Pipe	Axial fan	Axial fan	Axial fan	Axial fan	Axial fan
	Fan Diameter(inch)	22/28.6	15.8	15.8	18.5	19.3
	Defrosting Methord	Auto defrost	Auto defrost	Auto defrost	Auto defrost	Auto defrost
	Noise Level dB (A)	50	52	52	54	59
	Isolation	1	1	1	1	1
	Design Pressure High(PSI)	465	465	465	465	465
	Design Pressure Low(PSI)	252	252	252	252	252
	Outdoor Dimension(W×H×D)(inch)	32×21.75×13	32×21.75×13	32×21.75×13	38.75×26.25×15.5	35.75×31.62×17
	Dimension of Package(W×H×D)(inch)	34×24×14.75	34×24×14.75	34×24×14.75	40.5×28.25×17	40.5×33×17.5
	Net Weight/Gross Weight(LB)	67.5/77	67.5/77	67.5/77	109/121.5	133/145
	Refrigerant Charge(lb)	R410A/2.09	R410A/2.25	R410A/2.38	R410A/4.41	R410A/5.84
Conenection Pipe	Design Length(ft)	24.6	24.6	24.6	24.6	24.6
	Design Pressure High/Low(PSIG)	465/252	465/252	465/252	465/252	465/252
	Exrea Refrigerant Charge Per feet above design length(oz/ft)	0.22	0.22	0.22	0.33	0.33
	Outer Diameter Liquid Pipe(inch)	1/4	1/4	1/4	1/4	3/8
	Outer Diameter Gas Pipe(inch)	3/8	3/8	3/8	1/2	5/8
	Max Distance Height(ft)	16.4	16.4	16.4	16.4	16.4
	Max Distance Length(ft)	49.2	49.2	49.2	49.2	49.2

Warranty

Soleus International Inc. warrants the accompanying Soleus Air 13 SEER Mini Split Air Conditioner (Model: KFTHP-09-ID/KFTHP-09-OD, KFTHP-12-ID/KFTHP-12-OD, KFTZHP-12-ID/KFTZHP-12-OD KFTHP-18-ID/KFTHP-18-OD and KFTHP-24-ID/KFTHP-24-OD) to be free of defect in material and workmanship for the applications in its operation instruction for the period of parts specified below.

5 YEARS FOR COMPRESSOR
1 YEAR FOR OTHER COMPONENTS

This warranty shall not apply to broken or marred cabinets, accessories, knobs, filters or routine maintenance. This warranty does not apply to uncrating, setup, installation, removal of the product for repair or reinstallation of the product after repair.

This warranty does not apply to repairs or replacements necessitated by any cause beyond the control of Soleus International including, but not limited to, any malfunction, defect or failure caused by or resulting from unauthorized service or parts, improper maintenance, operation contrary to furnished instructions, shipping or transit accidents, modification or repair by the user, abuse, misuse, neglect, accident, incorrect power line voltage, fire, flood or other Acts of God, or normal wear and tear.

Warranty service must be performed by a qualified HVAC contractor. Soleus maintains a centralized service network to provide parts and assist in resolving service problems if difficulties are encountered. Soleus agrees to provide service information, sell repair parts and reimburse the dealer /serviceman for parts in accordance with Soleus International's Policies and Procedures.

SOLEUS INTERNATIONAL MAINTAINS THAT ALL WARRANTIES, INCLUDING IMPLIED WARRANTY OR MERCHANTABILITY ARE LIMITED TO THE TERMS AND CONDITIONS SPECIFIED ABOVE. SOLEUS INTERNATIONAL DISCLAIMS ANY LIBILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES AND IN NO EVENT SHALL SOLEUS INTERNATIONAL INC.'S LIABILITY EXCEED THE RETAIL VALUE OF THE AIR CONDITIONER.

This warranty covers only new products purchased from our authorized dealers or retailers. It does not cover internet sales, used, salvaged, or refurbished products.

FOR TECHNICAL SUPPORT AND WARRANTY SERVICE

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